DOCUMENT RESUME

ED 389 039 EA 026 866

AUTHOR	Sorensen, Chris; Sweeney, Jan
TITLE	Iowa Distance Education Alliance. Final Evaluation Report.
INSTITUTION	Iowa State Univ. of Science and Technology, Ames. Research Inst. for Studies in Education.
SPONS AGENCY	Department of Education, Washington, DC.
PUB DATE	Dec 94
CONTRACT	R203B2001-93
NOTE	457p.; For an abbreviated version of this report, see EA 027 163.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC19 Plus Postage.
DESCRIPTORS	College School Cooperation; *Computer Mediated Communication; *Distance Education; *Educational Technology; Elementary Secondary Education; *Information Technology; Information Transfer; Instructional Innovation; Mass Instruction; Online Systems; *Partnerships in Education; Professional Development; Technological Advancement
IDENTIFIERS	*Fiber Optics; *Iowa

ABSTRACT

This document describes the accomplishments of the Iowa Distance Education Alliance (IDEA). The Iowa Distance Education Alliance (IDEA) is a partnership involving educational institutions across Iowa that received funding from the federal Star Schools Program to demonstrate the use of the Iowa Communication Network's (ICN) fiber optic technology for K-12 instruction. Iowa Public Television (IPTV), the Iowa Department of Education, the state's 3 public universities, 15 community colleges, 15 area education agencies (AEAs), and many local school districts participated in the project over a 2-year period. The project focused on accomplishing six major goals: (1) coordinating the use of the ICN; (2) informing Iowans about the ICN; (3) preparing teachers to use the ICN; (4) connecting schools to the ICN; (5) improving instruction in five content areas through use of the ICN; and (6) documenting the effectiveness of the ICN. The first part of the report summarizes activities and evaluation findings related to the regional partnerships, Iowa's community colleges and AEAs working in collaboration with local school districts in each of the state's 15 regions. The second part summarizes the activities and evaluation findings related to the Teacher Education Alliance, which consists of the three state universities. Part 3 summarizes the activities and evaluation results related to the Communication and Resources Clearinghouse, which promotes communication between and among the Iowa Distance Education Alliance partners. The fourth section summarizes the 2-year accomplishments of the IDEA by the six project goals. The final section presents conclusions and recommendations resulting from the evaluation activities. Appendices contain a summary of regional coordinator reports, copies of the surveys used to collect data, and a list of research projects funded through Iowa's Star Schools Project. (LMI)

CE

ED 389 039

IOWA DISTANCE EDUCATION ALLIANCE

FINAL EVALUATION REPORT

Prepared by
Chris Sorensen
Jan Sweeney

RESEARCH INSTITUTE FOR STUDIES IN EDUCATION
E005 LAGOMARCINO HALL • COLLEGE OF EDUCATION
IOWA STATE UNIVERSITY • AMES, IOWA 50011
(515) 294-7009

December 1994

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

EA 026 866

Support for this report was provided in part by U.S. Department of Education
Star Schools grant #R203 B 2001-93

BEST COPY AVAILABLE

Iowa Distance Education Alliance

Final Evaluation Report

Prepared by
Chris Sorensen
Jan Sweeney

with assistance from
David Putz
Dawn Ruchensky

Research Institute for Studies in Education
E005 Lagomarcino Hall
College of Education
Iowa State University
Ames, Iowa 50011
(515) 294-7009

December, 1994

Support for this report was provided in part by
U. S. Department of Education Star Schools grant #R203 B 2001-93

DEMONSTRATING THE IOWA COMMUNICATIONS NETWORK (ICN)
EXECUTIVE SUMMARY
FROM THE IOWA DISTANCE EDUCATION ALLIANCE (IDEA) EVALUATION
(Iowa's Star Schools Project)

The Iowa Distance Education Alliance (IDEA) is a partnership involving educational institutions across Iowa that received funding from the federal Star Schools Program to demonstrate the use of the Iowa Communication Network's (ICN) fiber optic technology for K-12 instruction. Iowa Public Television (IPTV), the Iowa Department of Education, the state's three public universities, fifteen community colleges, fifteen area education agencies (AEAs), and many local school districts participated in the project over a two-year period. The project focused on accomplishing six major goals: (1) coordinating use of the ICN, (2) informing Iowans about the ICN, (3) preparing teachers to use the ICN, (4) connecting schools to the ICN, (5) improving instruction in five content areas through use of the ICN, and (6) documenting the effectiveness of the ICN. During the first year of the project, activities focused on teacher training and public relations efforts as the state prepared for the fiber optic network to become operational. The fiber optic network was "lit" during the second year of the project and the project's emphasis then shifted to using the network to deliver programming for K-12 students and teachers, although training and public relations efforts continued.

Key Findings

Iowa's Star Schools demonstration project has been extremely successful. All of the objectives and activities outlined in the IDEA proposal were accomplished during the two years of the project, and the momentum begun with the project is continuing. Cooperation and collaboration among educational organizations in Iowa improved. Innovative instructional activities are occurring over the ICN. Students and teachers who used the system view it positively, as do other Iowans who have seen the system in operation. Some of the highlights of the project include:

Public Perceptions

- Over 75,000 Iowans have heard presentations and received information about the ICN.
- Approximately 15,000 Iowans have seen the fiber-optic classrooms in demonstrations.
- Among Iowans who have seen the system in operation, over three-fourths (76%) believe interactive distance education will benefit K-12 education in Iowa.
- 81% of Iowans believe the ICN is important in providing students with access to resources such as computer databases and experts.
- 79% believe use of the ICN will improve Iowa students' abilities to succeed in a technological world.
- 65% believe all teachers should receive training on how to teach at a distance.

K-12 Student Perceptions

- 7,140 K-12 students participated in instructional courses and events over the ICN.
- Over 800 elementary students participated in a storyteller series over the ICN.
- Among K-12 students who have taken an ICN course, 83% were satisfied.
- 80% of students who have taken an ICN course would take another one and 75% would tell their friends to take one.

K-12 Teacher Training

- 2,866 K-12 teachers participated in inservice courses and activities offered over the ICN.
- 555 K-12 teachers participated in institutes on curriculum reform in mathematics, science, literacy, foreign language, and vocational education sponsored by the IDEA and rated these institutes positively.
- Approximately 900 Iowa educators participated in hands-on workshops to learn how to use the ICN and nearly 90% rated the workshops as excellent.

K-12 Teacher Perceptions

- K-12 teachers want their schools to be connected to the ICN; 96% of teachers participating in IDEA activities reported that having an ICN classroom in their building is important.
- Among teachers participating in IDEA training, 21% have now used the ICN for instructional purposes.
- 100% of K-12 teachers surveyed who have used the system felt distance education is an effective way to learn.
- 100% of K-12 teachers who used the ICN found the equipment easy to manage while teaching.
- Most teachers (75%) found that remote site students learned as much as students in the classroom with the teacher.
- 88% would encourage their colleagues to teach over the ICN.

K-12 Internet Use

- 1,126 K-12 teachers received training in how to use the Internet.
- The IOWA Database, an electronic clearinghouse on the Internet developed as part of the Iowa Star Schools project, is being used by Iowa educators.

Teacher Education

- 82% of the private colleges in Iowa believe distance education is important to include in preservice teacher education.
- Most of the private colleges (82%) were connected or plan to connect to the ICN.

Conclusions

As with any innovation, acceptance of the system as an integral part of K-12 education will take time. Implementation of the IDEA project occurred at a slower pace than originally anticipated, and although much effort was expended in the area of public relations, efforts to keep Iowans informed and to help educators realize the potential of the ICN remain an area for emphasis. Use of the ICN will continue to evolve, and as evidenced by the IDEA evaluation findings, continued success may hinge on future developments in several key areas.

Access to the system

The Iowa Star Schools demonstration project has been so successful that levels of demand for ICN time have increased rapidly, often exceeding capacity. Demands for access to the system, both in terms of physical connections (sites) as well as availability and access to current ICN classrooms has surpassed all expectations. The level of demand has created scheduling difficulties not previously anticipated.

- Action by state government is needed to continue to expand the network. IPTV and the regional schedulers at community colleges will need to continue to provide leadership for the evolving scheduling process.

Policy Issues

Critical concerns for K-12 teachers include additional planning and released time for distance education instructional activities and additional compensation for teaching courses over the ICN.

- District and/or regional and/or state policies need to be determined for teaching over the ICN. The IDEA partners have recommended that the Iowa Department of Education take a leadership role in initiating discussion of these issues.

Operational Issues

K-12 operational issues include coordination of common calendars and class schedules across school districts, the role of the facilitator in the remote classroom, and local costs for maintaining ICN facilities.

- Districts and/or regional and/or state policies and procedures need to be determined to enhance operation of the ICN. Appropriate educational groups to be involved in the discussion of these issues include the Iowa Department of Education, community colleges, AEAs, and local school districts.

Teacher Inservice

Teacher inservice was an integral component of the IDEA project and contributed significantly to its success. The workshops to train teachers to use ICN equipment were extremely effective. The institutes held to inform teachers about current reform efforts in key curricular areas were received favorably. Institute participation increased during the second year of the project and participants appreciated the convenience of inservice training provided over the ICN. Significant interest in the Internet training was also evident.

- Hands-on training for teachers in the use of the ICN and the Internet should be continued in a systematic and coordinated fashion, and equitable and inexpensive Internet access for all K-12 schools should remain a goal. The ICN should also continue to be used as a vehicle for providing teachers with opportunities to upgrade their knowledge and skills in content areas. The IDEA partners recommend that the universities and AEAs take a leadership role in the area of inservice.

Preservice Teacher Education

Information was provided and efforts were made to integrate distance education into the preservice teacher education programs across the state beyond the awareness level. There is a need for increased faculty involvement and training and increased access to ICN facilities.

- Opportunities for learning about distance education should continue to be provided for teacher education faculty and administrators. The Iowa Association of Colleges of Teacher Education (IACTE) appears to be a viable forum for initiating discussion of the role of distance education in teacher education.

Information Access and Coordination

Educators across the state are more aware of the ICN and the capabilities of distance education, but many perceive a need for more information, perhaps centralized, about the system and about activities that are available on the system.

- Information access and coordination should build upon current efforts by the Communication and Resources Clearinghouse, community colleges, AEAs, and other IDEA partners and alternative methods of providing information should be explored. IDEA partners recommend that the Clearinghouse take a leadership role in providing information to educators and students.

Collaboration

Collaboration and coordination among educational organizations contributed to the success of the IDEA project. Continued collaboration and cooperation will be necessary if the system is to be used to its fullest potential. There is general agreement among the project partners that the IDEA should continue and general agreement as to the roles of the partner groups.

- The IDEA partners recommend that IPTV take the responsibility for continuing the partnership and for initiating further discussions of the roles and responsibilities of the participating educational organizations.

Iowa Distance Education Alliance Final Evaluation Report
Table of Contents

Regional Partnerships 1
- Summary of Regional Coordinator Reports 1
- Year One Regional Partnership Survey 2
- Year Two Regional Coordinator Surveys 3
- State-wide Needs Assessment 5
- Regional Coordinators Future Directions Survey 6
- Iowa Opinions About Distance Education 7
- Student Opinions About Distance Education 8
- Teacher Opinions About Distance Education 9

Teacher Education Alliance 10
- Preservice 11
- Curriculum Institutes 13
- Inservice Workshops 15
- Verification Survey 17
- Participant Follow-Up Survey 17
- TEA Group Survey 19
- TEA Future Survey 19
- Research 20

Communication and Resources Clearinghouse 20
- On-Line Database Survey 21
- Database User Logs 21
- Survey of AEA Personnel 22
- Participant Follow-Up Survey 23

Summary by Goal 23
- Goal 1 23
- Goal 2 24
- Goal 3 25
- Goal 4 26
- Goal 5 26
- Goal 6 27

Conclusion 28

Iowa Distance Education Alliance Final Evaluation Report
List of Appendices

Appendix A: Summary of Regional Coordinator Reports	31
Appendix B: Regional Partnership Survey	38
Appendix C: Regional Coordinator Surveys	43
Appendix D: Needs Assessment	63
Appendix E: Regional Coordinator Future Survey	88
Appendix F: Iowa Opinions About Distance Education	93
Appendix G: Student Opinions About Distance Education	99
Appendix H: Teacher Opinions About Distance Education	110
Appendix I: Preservice Technology Survey	116
Appendix J: Preservice Symposium Survey	122
Appendix K: Preservice Workshop Survey	130
Appendix L: Preservice Telephone Follow-Up Survey	133
Appendix M: Curriculum Institutes Overall Information	141
Appendix N: Mathematics Institutes	148
Appendix O: Science Institutes	171
Appendix P: Foreign Language Institutes	194
Appendix Q: Literacy Institutes	218
Appendix R: Vocational Education Institutes	240
Appendix S: General Session Institute	264
Appendix T: Inservice Workshops	271
Appendix U: Verification Survey	291
Appendix V: Participant Follow-Up Survey	300
Appendix W: TEA Surveys	312
Appendix X: TEA Research	322
Appendix Y: Clearinghouse On-Line Survey and User Log Data	325
Appendix Z: Clearinghouse Survey of AEA Personnel	330

Iowa Distance Education Alliance Final Evaluation Report

As the Iowa Distance Education Alliance (IDEA) concludes activities conducted through the Star Schools project, it is time to reflect on the accomplishments and findings documented through the evaluation process. During the first year of the project, activities focused on teacher training and public relations efforts as the state prepared for the fiber optic network to become operational. The fiber optic network was "lit" during the second year of the project and the project's emphasis then shifted to using the network to deliver programming for K-12 students and teachers, although training and public relations efforts continued. This report is divided into five major sections. The first summarizes activities and evaluation findings related to the Regional Partnerships, Iowa's community colleges and area education agencies working in collaboration with local school districts in each of the state's 15 regions. The second summarizes the activities and evaluation findings related to the Teacher Education Alliance, which consists of the three state universities. The third summarizes the activities and evaluation results related to the Communication and Resources Clearinghouse, which promotes communication between and among the Iowa Distance Education Alliance partners. The fourth summarizes the two-year accomplishments of the IDEA by the six project goals. The fifth section presents conclusions and recommendations resulting from the evaluation activities.

REGIONAL PARTNERSHIPS

Summary of Regional Coordinator Reports

As part of Iowa's Star Schools project, community colleges and Area Education Agencies (AEAs) in each of Iowa's fifteen regions have been working together to connect schools to the Iowa Communications Network (ICN), inform Iowans about distance education, coordinate K-12 activities on the ICN, and collaborate with the Teacher Education Alliance to provide teacher training in distance education and in curriculum reform. This working relationship between the community colleges and the AEAs is called a Regional Partnership. Each Regional Partnership has a regional coordinator responsible for assuring that regional activities are accomplished. During the project, regional coordinators were asked periodically to report on specific activities identified in Iowa's Star Schools proposal. The information below summarizes the data collected for the duration of the project (October 1, 1992 to September 30, 1994) and was compiled from information submitted by the regional coordinators in quarterly reports to the evaluation team. The data do not reflect all activities of the regions, as one of the regions did not submit a final report. Appendix A provides more detailed information from the regional reports.

Public Relations

- **Over 75,000 Iowans in 3,180 groups around the state,** including groups of teachers, students, school administrators, parents, school boards, and ABE/GED coordinators as well as civic groups and open house groups at local schools, received presentations and information about distance education and the ICN.
- **14,994 Iowans attended 930 demonstrations** of the ICN across the state and were given the opportunity to see Iowa's fiber-optic classrooms in operation. One hundred sites across the state were used for demonstrations.
- Regional coordinators held **74 meetings**, more than half of them (39) over the ICN, with designated groups in the regions **to discuss the direction and progress of the project**. Community colleges, AEAs, public and private K-12 schools, private colleges and universities, and local businesses sent representatives to these meetings.

K-12 Instruction and Student Support

- **48 K-12 courses serving 868 Iowa students** were taught over the ICN, including courses in science, mathematics, foreign language, literacy, vocational education, and other disciplines.
- **241 instructional events reaching 6,272 Iowa students** were held on the ICN which allowed K-12 students to talk to experts, conduct experiments, interview legislators, connect to pen pals, participate in storytelling for elementary students, and more.
- **Five K-12 student telecommunications clubs were planned with 53 students** participating.
- **Five after-school hotlines** were planned to serve K-12 students in the five curriculum areas identified by the Star Schools project (mathematics, science, foreign language, literacy, and vocational education).
- **Two student tutoring projects** were set up over the ICN.
- **19 special programs reached 506 students from underserved groups**, including Chapter 1, special education, and minority students, females in mathematics and science, and non-native English speakers.

K-12 Teacher Training and Support

- **22 complete inservice courses to 492 K-12 teachers** were provided over the ICN.
- **142 inservice activities reaching 2,374 teachers** were conducted over the ICN. These inservice courses and activities were in addition to the inservice workshops provided by the Teacher Education Alliance.
- **916 Iowa teachers received release time** to participate in distance education activities.
- **1,921 teachers received funding** for attendance at inservice workshops and institutes related to distance education and curriculum reform.
- **75 Internet training sessions** were held across the state with **1,126 teachers** participating.
- **Ten mentoring or peer sharing programs** were established with **464 teachers** participating.
- **Ten technical hotlines** began operation to assist teachers with technical difficulties they may encounter when teaching over the ICN

Other Use of the ICN by Educational Groups

- **4,663 participants attended meetings and other activities** held on the ICN. Groups using the ICN for meetings and events included school boards, principals, teachers, K-12 students, GED students and instructors, and civic groups.
- **6,763 community college students** took courses over the ICN.

Year One Regional Partnership Survey

At the conclusion of the first year of the project, regional coordinators and regional partners (AEAs and community colleges) were surveyed to evaluate the effectiveness of the project. Those surveyed were asked to indicate the most positive impacts of the project in their region, describe existing difficulties or barriers, and predict the greatest challenges to success in the second year of the project (Appendix B).

Positive Impacts in the Regions

The impacts mentioned most frequently by all three groups of respondents (regional coordinators, AEA personnel, and community college personnel) included:

- The **training of K-12 teachers** to use distance technology.
- The growth of **enthusiasm among K-12 teachers** towards distance education.
- **Increased cooperation** and improved relationships among educational organizations, particularly community colleges and AEAs.
- A **public better informed** about distance education.

Difficulties and Barriers in the Regions

All three groups were consistent in their perceptions of the primary difficulties and barriers faced in the region during implementation of the project. These included:

- Frustration with the **slowness of the process,** including the time for connections to be made to the ICN as well as the time taken for the project to become operational.
- A perceived **lack of information** at the local level.
- The **demand for more classrooms** by local schools and the perceptions of inequity in site selection.

Challenges for Year Two

Several challenges to implementation of the project during the second year were also identified by respondents. These included:

- Dealing with information demands related to **Phase III** of the state's plan to connect schools to the ICN.
- Scheduling difficulties among schools due to **lack of consistency in school calendars** and class schedules.
- **ICN scheduling difficulties** due to the cumbersome process and to the improper functioning of scheduling software.
- A need for improved **communication from the state** to the local level.
- Ensuring that **quality offerings** are provided over the ICN.
- **Assessment of local needs.**
- **More funding** to local schools.

Regional Preparedness

Respondents were also asked to rate the preparedness of their region to implement Year Two of the project on a six point scale (1=strongly unprepared; 2=moderately unprepared; 3=slightly unprepared; 4=slightly prepared; 5=moderately prepared; 6=strongly prepared).

- The four **community college** respondents appeared to feel that their regions were **moderately to strongly prepared to implement the project** (two ratings of five and two of six) and had an average rating of 5.5.
- **Regional coordinators** felt **moderately prepared** to meet the challenges of implementation. The average rating for the fifteen coordinators was 5.2 with all but one coordinator giving their region a five or six.
- **AEA respondents felt the least prepared** with an average rating of 4.5, although seven of the twelve respondents provided a rating of five or six.

Year Two Regional Coordinator Surveys

In addition to the quantitative data collected through quarterly reports from the regions, the regional coordinators were asked to respond to several open-ended questions during the second year of the project. This information was collected in order to provide a richer description of what was occurring in the regions. In January, 1994, regional coordinators were asked to describe K-12 activities occurring over the ICN in their regions, highlighting the most significant events. Their replies are included in Appendix C. Regional coordinators were asked during the summer to explain the positive impacts of the project in their region, to voice concerns, and to describe some of the activities conducted in their region (Appendix C). Responses are summarized below.

Positive Impacts Across the State

Regional coordinators indicated that public relations efforts across the state were successful and that educators were more enthusiastic about using the system.

- **Teachers, students and citizens are more aware** of the ICN and of distance education and attitudes are more positive.

- **K-12 schools are beginning to take the initiative** in planning and delivering instruction over the ICN, including activities for elementary students, classes for alternative high school students, full semester courses in a variety of areas, and other creative uses of the network.
- **Teacher inservice and networking is occurring** on a regular basis over the ICN and teachers are being trained to become distance educators.
- **Increased levels of collaboration** between community colleges, AEAs, and local schools has occurred as a result of joint involvement in ICN activities.

Regional Coordinator Concerns

Regional coordinators identified several key areas of concern.

- **Operational issues and policies and procedures** need to be addressed including the need for additional ICN classrooms (particularly in K-12 schools), additional equipment in the current ICN classrooms, scheduling ICN time, coordination of school calendars and class schedules, teacher compensation, teacher certification, material distribution, and costs for schools.
- **Information dissemination** was identified as an area in need of increased attention.
- **Teacher training** activities were viewed as important, as was consideration of alternative uses of the system.
- Coordinators identified a need for **more time** in order to effectively demonstrate ICN use for K-12 education. They were also concerned that infusion of distance education might not be a priority for the state without **continued funding** .

Meeting Project Goals

Regional coordinators felt that significant progress was made across the state in reaching the goals identified in the Iowa Star Schools proposal. They noted that progress was slower than anticipated and that the process of change takes time.

- **Public relations efforts** and ICN demonstrations met with great success.
- **Teachers were trained** in distance education and Internet use and received support through released time, purchase of ICN and Internet time, and peer mentoring groups.
- **K-12 instruction occurred** over the network.
- **Schools were connected to the ICN** and provided with assistance in developing plans for use of the system.
- **Unprecedented collaboration occurred** among educational groups and across educational levels.

Significant Events

Regional coordinators identified many significant events that occurred across the state as a result of the Iowa Star Schools project. The following provides a small sample of the types of ICN activities occurring in the regions:

- **Summer school for K-6 low-income** children (20% Hispanic).
- **Grants awarded to teachers** to develop Internet and ICN projects involving students.
- Fourth and fifth grade students **sharing science and social studies projects**.
- Elementary students participating in an **Invention Convention**.
- Students using the ICN to **share fossils discovered** on an archaeology trip.
- Students discussing DNA with an **expert from the Human Gene Therapy Research Institute.**
- **Portrayal of Carrie Chapman Catt,** a well known national leader for women's rights.
- Upper level language classes **using Internet to search databases** in those languages.
- Teams of students **designing and implementing environmental service projects** for KIDS C.A.R.E.
- Students **talking with U. S. Secretary of Education** and interviewing candidates for governor.
- **Early Childhood training** for area educators.
- Russian, French, and Spanish **language courses.**
- More than 800 K-3 students participating in a **storyteller series**.
- **Alternative high school classes** on parenting, handling stress, and drug and alcohol abuse.
- Sixth grade science students performing a **genetic survey.**
- High school students **comparing crime** in two towns.
- Middle school students connected with university **teacher education students as pen pals**.

- Teacher inservice on **performance based assessment.**
- Elementary **talented and gifted students** sharing projects.
- Students talking with an engineer from Johnson Space Center and **building model Mars bases.**
- **Vocational students discussing entry level skills** with representatives from private companies.
- A regional **math bee**.
- Middle school students **discussing manned and unmanned space flight** with Dr. James VanAllen.
- High school students talking with community college **laser/electro optics instructors**.
- A **"Teens in Crime" meeting** with junior and senior students and Drake Law School faculty.

State-wide Needs Assessment

During Spring, 1994 a **state-wide needs assessment** was conducted to determine instructional, staff development, and administrative needs at the K-12 level that could be met via the ICN. Focus groups involving teachers, administrators, media specialists, AEA personnel, community college representatives, parents, students, school counselors, school board members, and community leaders were facilitated by regional coordinators in each region of the state. Following identification of regional needs through these focus groups, a state-wide focus group was conducted over the ICN to prioritize needs at the state level. Appendix D contains a report of findings.

Participants were asked to identify the most immediate **instructional needs for K-12** students state-wide that could be addressed through use of the ICN. Participants mentioned database access, skills classes, special education classes, and specialized classes such as Black Culture; however, the top three priorities were:

- **Courses not locally available**, particularly Advanced Placement (**AP**), Talented and Gifted (**TAG**), Post-secondary Enrollment Option (**PSEO**), and **Foreign Language** courses.
- Instructional units, **events or activities** including guest speakers, experts, demonstrations and field trips.
- **Student-to-student interactions** such as sharing projects and conducting joint research.

Priority **needs for resources and information** at the state-wide level included:

- Access to **Internet** and other electronic networks.
- Access to **special speakers** such as legislators, authors, historians, etc.
- Access to a database or **clearinghouse** with information on resources available on the ICN.
- **Student-to-student interactions** such as electronic pen pals, science fairs, student council meetings, etc.
- **Sharing instructors** across schools.

Critical **staff development needs** identified were:

- **Peer sharing** and networking within curricular areas.
- **State mandated inservice** and locally determined staff development opportunities.
- Credit and continuing education courses and **degree programs**.

Administrative needs that could be met through use of the ICN included:

- **Peer networking** and area or state-wide administrator meetings.
- Communication with **state officials**.
- **State mandated classes** and advanced degree programs.

Participants were also asked to identify the **primary barriers** to offering regional resources or accessing resources available in other regions using the ICN. The top three barriers included:

- **Lack of access** to ICN classrooms.
- **Lack of information** about what is needed and what is available.
- Administrative and local **operational issues** such as compensation for speakers and scheduling between schools without common calendars or class schedules.

Regional Coordinators Future Directions Survey

A survey of regional coordinators in each of the 15 areas was conducted in August, 1994. The purpose of the survey was to collect information to help determine future directions for the ICN and distance education in Iowa. Sixteen coordinators representing 14 regions responded to the survey. The coordinators were asked to respond to four open-ended questions (Appendix E). First, they were asked to indicate the ways in which they see the Iowa Distance Education Alliance (IDEA) continuing. Next, they were asked to describe the roles and responsibilities of IPTV, the community colleges, the AEAs, the universities, the Department of Education, and others in continuing the work begun through the IDEA. The third question asked the coordinators to describe the future role of the Clearinghouse, and the last question asked them to indicate what they believe are the primary issues that will affect the successful use of the ICN for education.

Continuing the IDEA

The most frequently mentioned ways for continuing the IDEA included:

- **Collaboration** and communication through such means as newsletters and continued meetings.
- **Sharing of resources**, curricula, and research.
- **Coordinated efforts to secure funding** through grants and to generate statewide interest in and awareness of the ICN.
- **Preservice and inservice** training.

Roles and Responsibilities for IDEA Partners

The coordinators were asked to identify the **roles and responsibilities** of the IDEA partners in continuing the work begun by the IDEA. The most frequent responses are included below.

Iowa Public Television

- Providing **technical support**.
- Maintaining the **master schedule**.
- Providing **coordination** and communication between and among the groups.

Community Colleges

- Providing **regional scheduling**.
- Providing **regional coordination** and communication between and among the groups.
- Providing **regional technical support**.

Area Education Agencies

- Coordinating **K-12 inservice** and training.
- Providing **K-12 consultant help**.
- Facilitating **course sharing.**

Universities

- Providing upper level and/or **graduate courses** and programs.
- Preparing teachers to teach over the ICN through **inservice training**.
- **Preservice** training.

Iowa Department of Education

- Providing **leadership** in distance education.
- Leading discussions of distance education **policies and procedures**.
- Providing inservices and **staff development** offerings.

The Clearinghouse

- **Disseminating** and sharing information.
- Providing **scheduling information**.
- Providing **information about course offerings**.

Others

- Business providing money and site sharing.
- The legislature providing funding and being informed about distance education.

Primary Issues Affecting Successful Use of the ICN for Education

A number of issues were believed to affect the successful use of the ICN for education. Those most frequently identified included:

- **Funding** for support of the existing system and for expansion of the system.
- Need for **staff development.**
- ICN **scheduling.**
- Need for **increased understanding, cooperation,** and **communication** between and among all educators and constituent groups.

Iowa Opinions About Distance Education

Nearly 15,000 Iowans participated in demonstrations of interactive distance education during the two-year Iowa Distance Education Alliance (IDEA) project. A total of 1,385 Iowans completed surveys as a part of those demonstrations. Respondents were asked to indicate their level of agreement with a series of statements using a five-point Likert scale (1=strongly disagree and 5=strongly agree) and to respond to two open-ended questions. The results of those surveys provide an impression of Iowans' opinions about distance education (Appendix F).

Survey respondents were 55 percent female and 44 percent male (1% did not answer this question). More than half (55%) were between the ages of 36 and 55; 29 percent were 35 or younger, and 16 percent were 56 or older. Those responding to the survey tended to be highly educated with more than four-fifths (84%) having had some college course work, and close to one third (32%) having completed a postgraduate college degree. Three-fifths (60%) had little or no knowledge about distance education, and a large proportion (84%) found the demonstrations to be helpful or very helpful. Responses were received from 11 of the 15 regions in the state and from Iowa Public Television (IPTV).

Areas of Agreement

The majority of Iowans agreed that:

- Interactive distance education **will benefit K-12 education** in Iowa (76%), and will benefit both large schools (72%) and small schools (87%).
- Distance education **is important in providing access to resources** such as computer databases, educational experts, and networking (81%).
- The use of interactive distance education **will improve Iowa students' abilities to succeed** in a technological world (79%).
- **All teachers should receive training** on how to teach at a distance (65%).
- Teachers at remote sites need to know the course subject matter well (68%).

Areas of Uncertainty

Iowans were uncertain whether:

- Interactive distance education is **more appropriate for teaching students at the secondary level** than at the elementary level (42% agreed, 27% were undecided, 31% disagreed).
- Distance education will result in **fewer teaching positions** (40% agreed, 29% were undecided, 31% disagreed).
- **Discipline will be a greater problem** in interactive distance education classrooms (32% agreed, 37% were undecided, 30% disagreed).

Benefits and Drawbacks

Demonstration participants were also asked to answer two open-ended questions. After coding the responses and categorizing them, the **greatest benefits** that Iowans see in using interactive television for K-12 instruction are:

- The ability to offer **more classes**.
- Access to **experts**.

- Courses for small schools.
- Access to educational opportunities.
- Preparing students for a technological future.

The participants saw the greatest drawbacks as:

- Classroom management.
- Lack of personal contact.
- Costs.
- Maintaining student-teacher interaction.
- Scheduling difficulties.

Student Opinions About Distance Education

Iowa students taking courses over the ICN were asked to complete surveys about their experience. Sixteen courses were surveyed and 177 students responded (Appendix G). Students were asked to indicate their level of agreement with a series of statements using a four-point scale (1=strongly disagree; 2=disagree; 3=agree; 4=strongly agree).

About half of the students were male (52%) and half female (48%) and nearly all were Caucasian (93%). Seventy-three percent were located at remote sites where the teacher was not physically present in the classroom. Grade levels ranged from 5th to 12th grades, but respondents were primarily 8th (21%), 11th (30%), and 12th (31%) graders. Seventy-seven percent were taking their first interactive television course. Subject matter areas represented included mathematics, science, literacy, foreign language, vocational education, and sociology. Surveys were submitted from five regions of the state.

Technical Aspects

Although students were pleased with many of the technological aspects of the classroom, technical difficulties still created some problems. Students said:

- It was **easy to see the TV monitor** (98%).
- The **microphones were easy to use** (93%).
- Graphics and **visuals were easy to read** on the monitors (77%).
- It was **easy to hear comments** from students at the other sites (80%).

However,

- More than half said that **technical problems interfered** with their learning (59%).
- The majority **did not know how to report technical difficulties** (55%).

Membership

Most students were satisfied with the level of interaction in the class and felt a sense of class membership. They felt that:

- **They were part of the class** (92%).
- **Remote site students were part of the class** (73%).
- They were **encouraged to become involved** in class discussions (77%).
- The teacher was **speaking directly to them** (63%).

Instruction

Students appeared satisfied with the instruction provided by the teacher. Most indicated that:

- The class was **well organized** (84%).
- The teacher paid **attention to remote site** students (90%).
- The teacher was **available to answer their questions** (82%).

However, some aspects that affect the instructional environment were problematic for a significant number of the students.

- About half felt that **students were more disruptive** than in a regular class (52%).

- Many said they **did not pay as much attention** as in a regular class (34%).
- Some felt it was **not as easy to pay attention** to the teacher on the TV monitor (25%).
- For more than half, **being "on TV" inhibited** their class participation (59%).

Satisfaction

Although some felt they were not learning as much as in a regular class (32%) and many reported difficulties in getting information about interactive distance classes (58%), in general, students appeared to be satisfied with the distance learning experience. Most said:

- They **would take another** interactive television class (80%).
- They would **tell their friends to take** an interactive television class (75%).
- Overall, **they were satisfied** with their interactive television class (83%).

Positive Aspects and Suggestions for Change

Students were also given an opportunity to answer two open-ended questions. Things they **liked best** about taking an interactive television class included:

- The opportunity to **meet and talk to other students** and to learn with and from them.
- The opportunity for a **new learning experience.**
- The opportunity to **take courses not available** in their local school.

The most frequent **suggestions for changes** or improvements included:

- Improvements in audio or video quality and **fewer technical problems.**
- **More time** on the system.

Group Comparisons

T-test analyses were used to test for differences in student ratings among different groups.

- There were **no differences in ratings between male and female** students.
- **Remote students were more satisfied** with the experience and were more likely to indicate they would take another distance course and would tell their friends to take one than were students at the origination sites.
- **Remote students thought information was easier to get** and they were more likely to know how to report technical difficulties, although mean scores indicated that these areas were problems for both groups.
- **Remote students rated microphones as easier to use** and visuals as easier to read than did origination site students.
- **Remote students were more likely to believe they were learning as much** as in a regular classroom.

Teacher Opinions About Distance Education

Eight K-12 teachers completed surveys after teaching a course using interactive television (Appendix H). These teachers taught nine courses over the system: three mathematics, one science, two literacy, two foreign language, and one vocational education. The teachers included five females and three males; two of the teachers were 25 or younger while four were 46-55. Six of the teachers had no previous experience with distance education. Three teachers had less than three years of teaching experience while five had more than 20 years of experience. Four teachers indicated a need for additional training in the effective use of the equipment, six for instructional planning for teaching over interactive television, and five for interaction techniques.

Areas of Agreement

All teachers (100%) agreed that:

- The interactive system **allows appropriate use of media materials.**
- The equipment in the classroom is of **high quality.**
- It is **easy to manage** the equipment while teaching.

- **Technical support is readily available.**
- **Specific skills are needed** to be a successful distance teacher.
- They felt **successful in encouraging remote students** to become involved in class discussions and activities.
- They were **confident in their abilities** as interactive television teachers.
- Teaching in an interactive television class was a **positive experience**.
- Distance education is an **effective way to learn.**

Most teachers agreed that:

- The **school is supportive** of distance education (75%).
- **Procedures** for using the system **are clear** and reasonable (88%).
- The physical **layout** of the classroom was **conducive to learning** (76%).
- There was **no difficulty getting materials to remote site students** (72%).
- **Remote site students learn as much** as origination site students (75%).
- **Teachers** using the system **receive effective training** in distance education techniques (71%).
- The distance classroom **allows for experimentation** with new teaching techniques (88%).
- **They were as effective** teaching in an interactive television class as in a regular class (85%).
- They **would encourage colleagues** to teach over the system (88%).

Areas of Difficulty

Aspects that most agreed were problematic included:

- It was **difficult to provide for the social and emotional needs** of remote students (72%).
- Preparing materials **takes more time** than for regular classes (86%).

Some teachers also felt that:

- **Technical problems interfered** with student learning (51%).
- There were **more discipline problems** at remote sites (33%).

Positive Aspects and Suggestions for Change

Four of the eight teachers responded to two open-ended questions on the survey. What they **liked best** about teaching on an interactive television system included:

- Ability to **interact and discuss with students at other schools**.
- Opportunity to **use different teaching techniques**.

Things they would like to **change or improve** include:

- Better **communication with site monitors**.
- Resolution of **scheduling conflicts** across schools.
- More **flexibility in room design.**
- Ability to **show copyrighted materials**.

TEACHER EDUCATION ALLIANCE

The Teacher Education Alliance (TEA) is composed of representatives from each of the three state universities; Iowa State University, the University of Northern Iowa, and the University of Iowa. The role of the TEA is to provide inservice training related to both curriculum reform and distance education, to promote the integration of distance education into the preservice teacher education curriculum, and to conduct research and evaluation activities related to the project. TEA inservice **workshops and curriculum institutes have reached more than 1,000 Iowa teachers**. A newsletter published by the TEA reaches more than 1,000 educators in the state, and preservice programs have begun to integrate distance education into the curriculum for preservice teachers.

Preservice

The goal of the preservice component of the TEA was to assist teacher education programs in the state in incorporating distance education into their curriculum. A series of activities were held across the state during the two years of the project, including a survey of technology needs, a symposium at Iowa State University (ISU), a three-day writing workshop at ISU, a two day conference in cooperation with the Iowa Distance Learning Association at Drake University, and four colloquia held at ICN sites around the state. Evaluations of several of these activities indicated that participants felt these activities were valuable. In addition to these activities, the group prepared an Interactive Television Resource Guidebook that was distributed to each of the teacher preparation programs in the state; a newsletter was published (the d.l.i.t.e Illuminator) and distributed to all teacher preparation programs in the state; and several grants were awarded to teacher education faculty for innovative uses of distance education with teacher education students.

Preservice Technology Survey

All teacher education institutions in the state were surveyed during Fall, 1992 (Appendix I) to assess current technology applications and participation in distance learning activities. The survey determined that:

- **Faculty seldom used telecommunications** and interactive television technologies.
- **Students were more likely to use computers** and traditional media rather than multimedia and interactive television.
- **Distance education is typically included at an awareness level only** during teacher training.
- Graduate programs tend not to require a media/technology course.

Preservice Symposium

Twenty-eight representatives from 15 teacher education programs attended a symposium on distance education in April, 1993 (See Appendix J). **Ratings for the institute were average to excellent**. On a five-point scale, participants rated the organization of the institute, opportunity for participant feedback, and long term applicability of the information highest (4.36, 4.31, and 4.31 respectively).

Preservice Workshop

A workshop was held in conjunction with the first Iowa Distance Learning Association (IDLA) conference. **Six sessions were developed specifically for teacher educators**. Representatives from 17 teacher preparation programs attended. **Three of the sessions were rated as very good to excellent** on a six-point scale (Interactive Television Guidebook, Visual Presentations with Pizzazz, and Distance Education and the K-12 Curriculum) while **three sessions were rated good to very good** (The Logistics of Making Teacher Education Connections, Preparing Tomorrow's Teachers for Distance Education, and Enriching the Curriculum through Telecommunications). Participants indicated that the sessions were most useful in increasing their awareness of distance technology and demonstrating uses of the technology (See Appendix K).

Preservice Telephone Follow-up Survey

In order to assess the impact of the project on teacher education and to determine future needs, a telephone survey was conducted during September, 1994 (Appendix L). Department chairs from all of the private teacher preparation programs in the state (28) were surveyed; a total of 22 responded. The following summarizes their responses.

- **Fifteen institutions reported participating in activities sponsored by the IDEA preservice group,** while seven reported no participation. The most frequently mentioned activities were the ISU symposium and the Drake conference, although some reported attending ICN meetings and the guidebook workshop. One reported receiving a mini-grant. Several of the institutions reported participating in activities, but were unable to identify the activity.
- **Sixteen institutions reported receiving the d.l.i.t.e Illuminator**, and six could not remember seeing it. The newsletter was primarily used for distribution or circulation to the faculty to

increase their awareness. Five reported that only the chairperson read it. Some reported sharing it with the media center director or computer technology person, while a few reported sharing it with students.

- **Fifteen institutions were using the Interactive Resource Guidebook** in various ways, primarily sharing it with others in the college, including administrators, methods teachers, media personnel, academic affairs committees, administrators, planning committees, and other faculty members in the department. Four institutions were using components from the guidebook in classes and one showed the video to classes. In three cases, the guidebook was not used or shared beyond the receiving faculty member. Seven of those interviewed did not remember seeing the guidebook.
- **Most of the institutions reported integrating distance education into their teacher education curriculum** at some level. Half of the institutions reported integrating distance education at an awareness or theoretical level, four show the students the equipment used in an interactive television class, and four provide some hands-on activities for the students. Eight of those interviewed indicated that their teacher education programs did not include distance education as part of the curriculum; six of those had no plans to include it, and two indicated they were not convinced of the need. Those including it at an awareness level or in current activities had plans to demonstrate interactive systems, simulate distance education environments, build interactive television classrooms, integrate distance education into seminar classes, and use interactive television for student and teacher observations. Some indicated that plans were still under development.
- Although five institutions reported no faculty involvement with distance education, the **majority indicated that at least some faculty members had been exposed to distance education** through meetings, demonstrations, workshops, downlinked programs, use of the Internet, and teaching activities and courses over the ICN. Eight institutions indicated there were no plans to increase the current level of faculty involvement.
- **Most of those interviewed were not aware of administrative uses of distance education** or of plans for administrative use. Six indicated that administrators were working on plans for integrating distance education on campus while others indicated that administrators have asked for an interactive television classroom, held meetings over a distance, used the Internet, and used the ICN for data traffic.
- When asked for their opinions about the **top three issues** related to the integration of distance education into the preservice teacher education curriculum, the responses received most frequently were **(1) faculty involvement and training, (2) access to an interactive television classroom, and (3) money**. Other issues to be dealt with included creating awareness that distance education is relevant to teacher education, scheduling and coordination issues, quality issues, competition among institutions, staffing issues, curriculum issues, access to resources, and planning.
- Respondents were also asked to indicate the appropriate groups or **organizations to take a leadership role** in the use of distance education for preservice teacher education. The most frequent responses were **(1) the Iowa Association of Colleges of Teacher Education** (IACTE), **(2) the Iowa Department of Education, (3) other professional organizations** in the curriculum areas and in technology (ICTM, ISTA, ICUE, ASCD, etc.), and **(4) the teacher education departments** themselves. Other responses included forming a special task force, the regent institutions, the AEAs, local school districts, NCATE, and the presidents of the colleges.
- When asked to **rate the importance of including distance education** in preservice teacher education on a one to ten scale (one indicating not at all important and ten indicating extremely important), nearly all of the 22 respondents rated it in the upper half of the scale (6 to 10). **Thirteen rated the importance 6 or 7, five between 8 and 10**. Only four institutions rated it 5 or lower.
- **Three of the institutions were connected to the ICN. Six planned to connect within the next year and three within the next five years**. Six indicated they plan to connect but no timeline had been established. Four institutions had no plans to connect to the ICN.

Curriculum Institutes

The goal of the curriculum institutes was to familiarize Iowa K-12 teachers with the most recent curriculum reform efforts. Sessions were conducted in five targeted content areas (mathematics, science, foreign language, literacy, and vocational education). The institutes were planned to serve 594 Iowa educators (three from each of Iowa's 99 counties each year of the project); a total of **555 attended the institutes** (Appendix M). In 1993 the five institutes were each held at university sites, each using a five-day format, but in 1994 the institutes had a variety of formats. All five content areas participated in a two-day general curriculum session held at 22 sites across the state over the ICN and each held an additional session for the specific content area. The mathematics and science sessions were held prior to the general session, with each held on three Saturdays over a period of three months using 15 ICN sites each. The literacy, foreign language, and vocational sessions were held following the general session. Literacy was held for three days at the University of Northern Iowa, foreign language for five days at the University of Iowa, and the vocational session connected three sites around the state over the ICN for three consecutive days.

Curriculum Institute Overall Summary

- **Nearly all** (92%) of those attending the institutes were **K-12 classroom teachers.** The remainder were K-12 administrators, curriculum coordinators, media specialists, and AEA consultants.
- About **half** (53%) **taught only at the high school level,** while 12 percent taught only at the junior high or middle school level and 9 percent at both the junior high and high school levels. Sixteen percent were elementary teachers.
- Thirty-one percent had less than ten years of experience as an educator, 29% had 11-20 years of experience, and one-third (34%) had more than 20 years of experience.
- **Few participants** (6%) **had ever taught over an interactive television system**.

Evaluation forms for the institutes consisted of several common Likert-scale items and two open-ended questions. Overall ratings, both year one and year two, indicated that participants felt the institutes were above average to excellent. Specific areas scoring high on the five-point Likert scale during the two years included:

- The **quality of the speakers** and materials.
- The **opportunity for participant interaction**.
- The **applicability** of the information.

Ratings for the two years suggest two areas for **improvement**:

- Improved quality of the **information received prior** to the institute.
- **Clarification of objectives**.

Comparisons of ratings also show that year two sessions utilizing the ICN as a delivery mechanism had lower overall ratings than those utilizing the more traditional format of bringing teachers to campus.

In response to the open-ended questions, the aspects identified as **most useful** were:

- **Sharing** with other teachers.
- **Using the equipment.**
- Learning about/**using the ICN**.
- **Teaching examples**/strategies

In general, suggestions for improvement focused on providing more of the things the participants liked best. The most frequently mentioned areas for **improvement** were:

- More **time for sharing** and discussion
- More **time to use the equipment**
- More **hands-on activities**
- More **teaching examples**
- **Better information** prior to the institute.

Pre- and post-assessment results for the two years from each of the five content specific sessions indicate that **participants learned a great deal**. Pre-assessment scores ranged from 1.14 to 4.00 on a five-point scale, while post-assessment scores ranged from 1.89 to 4.48 on a five-point scale.

In comparing the content areas, **overall satisfaction ratings were highest both years for the literacy institute** and lowest both years for the mathematics institute. The three institutes that used the ICN for delivery in 1994 (mathematics, science, and vocational) all showed significant declines in overall ratings and in ratings on most evaluation items compared to 1993.

Curriculum Institute Content Areas

Each of the five content areas conducted institutes in each of the two years of the project. The following provides a brief synopsis of evaluation results by content area. See the Appendices for more detailed information.

- **Mathematics**: 75 educators attended the 1993 mathematics institute and 88 attended in 1994. 97% each year were K-12 classroom teachers. Most had no previous experience with interactive television instruction (89% in 1993 and 78% in 1994). Pre- and post-assessments indicate that participants gained knowledge as a result of attending the institute. Overall effectiveness ratings were 3.61 in 1993 and 2.91 in 1994 on a five-point scale (1 indicating poor and 5 indicating excellent). On most items, ratings declined from 1993 to 1994 with the exception of information about using interactive television in mathematics instruction which improved from 3.05 to 3.13. In 1994 the institute was held using the ICN rather than using face-to-face instruction. 81% of the 1994 participants were satisfied or very satisfied with using the ICN for instructional delivery and 95% with conducting the institute on separate rather than consecutive days. Sharing with other teachers and teaching examples were noted as useful components both years (Appendix N).
- **Science**: While 67 educators attended the science institute in 1993, 82 attended in 1994 and most both years were K-12 classroom teachers (89% and 88% respectively). Most knew little or nothing about distance education (85% in 1993 and 79% in 1994). Pre- and post-assessments indicate that learning occurred. The overall effectiveness ratings ranged from 3.75 in 1993 to 3.16 in 1994 on a five-point scale (1 indicating poor and 5 indicating excellent). Means for consistent items dropped slightly in 1994, with the exception of ratings on information about alternative assessment which improved. Most participants were satisfied or very satisfied with using the ICN to deliver the institute (89%) and with using three separate rather than three consecutive days (96%). While the science education reform session was most frequently identified as the most useful component in 1993, the teaching examples were noted most frequently in 1994 (Appendix O).
- **Foreign Language**: 34 educators (88% classroom teachers) attended the foreign language institute in 1993, while 29 (100% classroom teachers) attended in 1994. The majority knew little about distance education prior to attending the institutes (69% and 71%). Pre- and post-assessments both years indicated that participants learned a great deal. Gains were larger in 1994 than in 1993. Overall effectiveness ratings for the institutes (using a 5-point scale with 1 indicating poor and 5 indicating excellent) were 3.97 in 1993 and 4.10 in 1994. Evaluation ratings improved from 1993 to 1994 in several areas including clarity of objectives, effective use of time, information about computer facilitated foreign language instruction, and applicability of the information. In both years, participants identified learning about Hypercard and learning about the ICN as the most useful components of the institutes (Appendix P).
- **Literacy**: While 30 participants attended the literacy institute in 1993, 46 attended in 1994. Most were K-12 classroom teachers (97% in 1993 and 85% in 1994). Attitudes towards the effectiveness of interactive television for instruction improved dramatically each year. Pre- and post-assessments indicate that learning occurred.

Post-assessment scores were slightly lower in some areas in 1994. Overall effectiveness ratings for the literacy institutes were 4.57 in 1993 and 4.55 in 1994 (using a 5-point scale with 1 indicating poor and 5 indicating excellent). Ratings for individual items showed little fluctuation between the two years. The opportunity to interact and share with other teachers was one of the components identified as most useful both years of the institute as was the quality of the speakers and presenters (Appendix Q).

- **Vocational Education**: The number of participants in the vocational education institute doubled from 1993 to 1994 (26 and 56 respectively). Nearly all those attending were K-12 classroom teachers (97% and 91%), primarily at the high school level. One region of the state did not send participants in either year. Pre-and post-assessment scores were somewhat lower in 1994 than in 1993 for most items. Overall effectiveness ratings for the institutes were 4.33 in 1993 and 3.66 in 1994 (using a 5-point scale with 1 indicating poor and 5 indicating excellent), although 94% in 1994 indicated that they were satisfied or very satisfied with using the ICN to deliver the institute. One of the three sites used for the 1994 vocational institute had significantly lower ratings than the other two sites. For the other two sites, ratings for applicability of the information and information about workplace readiness exceeded the 1993 ratings. While using the equipment was most frequently identified as the most useful component in 1993, the most useful components identified in 1994 were the workplace readiness materials and the teaching examples (Appendix R).
- **General Session**: 269 mathematics, science, foreign language, literacy, and vocational educators (93% K-12 classroom teachers) attended a two-day general curriculum reform session in 1994. This session was designed to address reform issues common across the content areas. The overall satisfaction rating for the general session (on a four-point scale with 1 indicating very unsatisfactory and 4 indicating very satisfactory) was 3.02, with 84% of the participants indicating the session was satisfactory or very satisfactory. The aspects of the session mentioned most frequently as positive were the teaching examples and the opportunity to share and interact with other teachers (Appendix S).

Inservice Workshops

Inservice workshops on distance education were held around the state both years of the project. These workshops were held at more than 35 sites and provided participants with hands-on experience with interactive television technology. During 1992-1993, data were collected from all 16 of the workshops held. During 1993-1994, 22 workshops were conducted (18 three-day and 4 one-day). Data were received from 15 workshops. Workshop coordinators estimated that approximately 900 Iowa educators participated, however, only 633 of the participants completed a demographic survey during the two years of the project; 344 during the first year, and 289 during the second. Data were unavailable for the remainder of the participants. In addition, workshop pre- and post-assessments and evaluations were collected only during the 1992-1993 workshops. The results presented in this section may not reflect the entire population of educators trained during the workshops (See Appendix T).

Description of Participants

Among the 633 participants submitting information:

- 54% were female; 44% male.
- 42% held a bachelor's degree; 48% a master's; 7% a doctorate or education specialist.
- The average number of years as an educator was 18, with a range from 1 to 45 years.
- 60% **were K-12 classroom teachers**; other participants included AEA staff (9%), K-12 media specialists (9%), K-12 administrators (4%), K-12 curriculum coordinators (2%), K-12 guidance counselors (1%), and community college instructors (11%).

- 36% taught mathematics or science or both; 13% taught in the area of literacy; 12% were vocational educators; 7% taught a foreign language; 9% taught media or computer courses; 4% classified themselves as elementary teachers; 15% taught in other areas.
- 9% taught at the elementary level; 7% middle school/junior high ; **45% high school** ; 14% postsecondary; and 13% taught across levels (3% elementary/middle, 6% junior high/high, 4% high/postsecondary).
- 9% had previous experience with interactive television instruction.

Workshop Ratings

Evaluation results indicate that response to the workshops was overwhelmingly positive. **Overall evaluation ratings on a five-point scale generally were above 4.50 for each workshop**. The overall rating for all workshops was 4.87 (1=poor, 2=below average, 3=average, 4=above average, 5=excellent), with 87% rating the workshop as excellent. Nearly all participants rated the workshop as above average to excellent in:

- The clarity of its objectives (99%).
- Effective use of time (95%).
- Providing opportunities for participant interaction (99%).
- Applicability of information (99%).
- Organization (98%).
- Providing experience with distance learning systems (97%).
- Providing information about critical issues in distance teaching (98%), teaching and learning strategies (96%), interactive technologies (98%), and research findings and evaluation strategies (88%).

In responding to open-ended questions, participants indicated that the **most useful aspects** of the workshops were

- **using the equipment**,
- **sharing with other teachers**, and
- **discussion of critical issues**.

The most frequently mentioned **suggestions for improvement** were

- allowing **more time** to use the equipment, specifically the ICN, and
- providing **examples** of good television teaching.

Pre- and Post-Assessments

Pre- and post- assessment results indicated that **participants learned a great deal**. **Paired t-tests** of pre- and post-assessment scores indicate **significant differences on every item**. At the completion of the workshop, participants knew more about the unique characteristics of interactive television, components of the system, the rationale for its use, resources needed to use the system, operation of the equipment, teaching strategies for distance instruction, how to develop lessons to use on the system, research and critical issues related to se of interactive television, and how to evaluate its use.

Pre- and post-assessment comparisons of participants with different educational levels (Bachelors degree versus beyond a Bachelors degree) showed no differences in scores. However, comparisons of K-12 classroom teachers with other participants showed differences. **Teachers had less experience with interactive television prior to the workshop** and rated their level of knowledge lower on every item on the pre-assessment compared to other participants. No difference in knowledge was evident on the post-assessments, although ratings of the effectiveness of interactive television for instruction were significantly lower for teachers than for the other group.

On the pre-assessment, participants were asked **how they felt** about interactive television. The most frequent responses were:

- **Excited** about the opportunities it offers.
- Very **uninformed**.
- **Undecided** or mixed feelings.

The most frequent ways they **envisioned interactive television being used** were to:

- **Broaden the curriculum.**
- **Help small rural schools.**
- Provide **advanced classes.**
- Provide **college-level classes** and adult education.
- Provide **inservice for teachers.**

On the post-assessment, participants were asked to list the greatest benefits and greatest challenges of using interactive television. The top four responses in each category are listed below.

- **Benefits**: (1) **expanding course offerings,** (2) opportunities for **teacher inservice,** (3) **reaching more students** using technology, (4) **college credit classes** and continuing education opportunities.
- **Challenges**: (1) **more time** required for preparation, (2) **mastering** the **equipment,** (3) interacting with **remote site students** and keeping them involved, (4) coordination and **scheduling.**

Participants were also asked **what their school would need to do** in order to use interactive television. The most frequently mentioned items were:

- **Modify scheduling.**
- **Acquire** additional **funding.**
- **Build** a classroom.
- Make a **commitment** and provide leadership.

Verification Survey

At the conclusion of the first year of the Iowa Star Schools project, participants in workshops and institutes were mailed a survey to verify the accuracy of the evaluation findings. This survey was recommended by the project's external evaluators during their first year site review. A random sample of 212 participants were mailed the survey as well as copies of evaluation findings from the first year of the project. One hundred and twelve responded (53%). Summaries of their responses are included in Appendix U. Overall, they felt that the evaluation results were what they expected and that the **methods and instruments used for evaluation were adequate.**

Participant Follow-up Survey

As a conclusion to the Iowa Distance Education Alliance curriculum institutes and inservice workshops, a follow-up survey was mailed in September, 1994. The survey was designed to determine the level of use of the ICN by the participants and to assess the perceptions of participants about critical needs in the state that are important to address if distance education is to succeed in Iowa. A total of 710 teachers were surveyed and 325 replied (46%). Tables are provided in Appendix V. Among those responding to the survey:

- 63% were female; 37% male.
- **75% had been teaching for over ten years**; 22% for ten years or less.
- 59% held only a bachelor's degree; 38% a master's degree.
- 27% have an ICN classroom in their school building.
- **21% have actually used the ICN.**
- 18% teach at the elementary level; 11% middle school or junior high; 56% high school; 13% at multiple levels (2% elementary/middle, 9% junior high/high, 2% high/postsecondary).
- **48% taught either mathematics or science or both**; 20% literacy; 17% vocational education; 12% foreign language ; 3% other social sciences.
- 27% attended only an inservice workshop; 28% only a curriculum institute; 43% both.
- 37% attended project activities during 1993; 53% during 1994; 9% attended both years.

The teachers were asked to rate the adequacy and importance of 19 items related to teachers' use of the ICN for K-12 instruction. The items were rated on six-point scales. For the importance scale, 1 indicated very unimportant and 6 indicated very important. Items were ranked based on the mean score and the percent of respondents rating the item as 6, very important. The items rated **most important** were:

- Teacher **planning time** for distance teaching (Mean=5.44; 61% rating it very important).
- Distance education **technical training** for teachers (5.41; 58%).
- Proximity of **ICN classrooms** to school buildings (5.38; 59%).
- **Scheduling** procedures for the ICN (5.34; 54%).
- **Principal support** for distance teaching (5.32; 50%).
- **Supervision of remote site** students (5.31; 57%).

Teachers were also asked to indicate how adequately these same items are currently being addressed in the state, with one indicating very inadequately and six indicating very adequately. In looking at the adequacy ratings, the highest rating (4.10 on a 6-point scale) is still just somewhat adequate, indicating that improvement is needed in all 19 areas. The items rated as **least adequate** (items with the lowest means and the greatest percent of 1, 2 or 3 ratings) were:

- Teacher **planning time** for distance teaching (Mean=2.22; 84% rating it inadequate).
- **Extra pay** for ICN teaching (2.38; 77%).
- Teacher **released time** for distance teaching (2.47; 76%).
- School **district policies** for ICN use (2.70; 68%).
- Teacher **recognition** for ICN use (2.87; 67%).
- **Scheduling** procedures for the ICN (3.01; 61%).

"Need" was defined as the difference between the adequacy rating and the importance rating for each item. Fifteen of the 19 items had a difference of more than 1 point, indicating a need in that area. The four items having less than a one point difference between adequacy and importance were related to confidentiality policies, superintendent support, access to ICN information, and design of the ICN classroom. The six items with the **largest differences between adequacy and importance** were:

- Teacher **planning time** for distance teaching (difference=3.22).
- Teacher **released time** for distance teaching (difference=2.77).
- **Extra pay** for ICN teaching (difference=2.43).
- **Scheduling** procedures for the ICN (difference=2.33).
- Proximity of **ICN classrooms** to school buildings (difference=2.25).
- School **district policies** for ICN use (difference=2.14).

Teachers were also asked to respond to open-ended questions. When asked to list the **issues** they believe are important and need to be addressed for successful K-12 instructional use of the ICN, the most frequently mentioned responses were:

- **Access** to ICN sites and equity in site selection
- Teacher **preparation time and pay** for distance teaching
- Distance education **training**.

When asked to indicate the **single issue of greatest concern**, the top three items were:

- **Access** to a site and equity in site selection
- The **costs** of distance education for local schools
- Teacher **preparation time** and additional **pay** needed.

Teachers were then asked to indicate what **actions need to be taken** to resolve issues for K-12 use of distance education. Two suggestions were mentioned most frequently:

- **Government support** (both state and federal) for distance education costs.
- Providing **teacher training** in distance education.

TEA Group Survey

During January, 1994, coordinators of each component of the TEA were asked to describe activities conducted over the ICN and to highlight significant activities conducted as part of the Star Schools project. Responses are included in Appendix W. Some of the activities described include:

- Use of the ICN for student teachers to observe exemplary classroom practices.
- Use of the ICN for the mathematics institute.
- Three literacy "teacher swapshops" held over the ICN.
- Using the ICN to evaluate the oral competency of over 90 foreign language teachers.
- A vocational education presentation at the Iowa Distance Learning Association conference using the ICN.

TEA Future Survey

The members of the Teacher Education Alliance were surveyed during their last meeting, September 29, 1994 about their perceptions of the future of distance education in Iowa (Appendix W). Respondents identified several key areas that will affect the successful use of the Iowa Communications Network (ICN) for education. These included:

- Resolution of **management issues** including ownership and control of the system, additional connections to the network, scheduling conflicts, and financial and administrative support.
- Continued **training for teachers** at both the preservice and inservice levels and additional training for administrators.
- Increased **dissemination of information** about distance education to teachers, administrators, school boards, and the general public.

Continuing the IDEA

Respondents agreed that the IDEA and the TEA should continue their existence in one form or another. While some advocated the creation of a formal organization, others mentioned informal alliances, cooperative efforts, and working teams. Continuation of the group was seen as important for:

- Developing **future proposals** for further funding.
- Conducting follow-up studies and other **research** activities.
- Providing **leadership** for systemic change.

Roles and Responsibilities for IDEA Partners

Respondents were asked to describe the roles that various groups should have in continuing the work begun by the Iowa Star Schools project. The roles identified are summarized below.

Regent Institutions

- Leadership role in **pursuing future funding.**
- Continued focus on **inservice and preservice** training for teachers.
- **Evaluation** of distance education in Iowa.
- Continued **research** in the area of distance education.
- **Collaboration** among institutions.

Iowa Public Television

- **Public relations** and information efforts.
- Maintaining a **state-wide alliance.**
- **Liaison** with state government.
- Improving **access** to the ICN.

Community Colleges

- **Scheduling** and management of the system.
- **Staff development,** particularly in the vocational education area.

Area Education Agencies

- Teacher **inservice** training.
- **Disseminating information** to local schools, teachers, and administrators.
- Providing **leadership at the K-12** level.

Department of Education

- **Disseminating information** on distance education.
- **Seeking funds** for use in distance education projects and research.
- Taking a proactive approach in **resolving management and structural issues** related to K-12 use of the ICN, such as teacher certification, staffing issues, and scheduling issues.

Clearinghouse

- Collecting, maintaining, and disseminating information and **maintaining a database**.
- **Assisting** teachers and students in **accessing information**.

Research

The research component of the TEA conducted activities designed to further the level of knowledge about distance education both in the state and in the profession. To accomplish this mission, the following activities were completed:

- Published a **monthly newsletter,** TEA Times, with a circulation of 1,300. Recipients included all IDEA members, participants in all TEA workshops and institutes, all state legislators, and numerous others with an interest in the project.
- Prepared a **monograph,** Distance Education: A Review of the Literature, which was published by the Association for Educational Communication and Technology (AECT).
- Funded **16 research projects** dealing with distance education in Iowa (Appendix X). Findings were complied and published in an encyclopedia of distance education research.
- Prepared a series of **eight single-concept videos** for distribution to all preservice teacher education programs in Iowa and a video titled **"A Room with a View,"** for distribution throughout the state (Appendix X).
- Assembled a **library of distance education** journals, texts, and other references.
- **Published articles** in professional education journals.

COMMUNICATION AND RESOURCES CLEARINGHOUSE

The Iowa Distance Education Alliance Clearinghouse component developed a database with assistance from the North Central Regional Education Laboratory (NCREL). This database is available over the Internet. The Iowa Database contains information related to distance education, the Iowa Star Schools project, and other education databases. Since the Clearinghouse was not operational until midway through the second year of the project, it was not possible to initiate evaluation activities until the final stages of the project. Evaluation of the Clearinghouse consisted of four parts. First, a survey was placed on the database in August, 1994 with a request for those accessing the database to complete the instrument either electronically or on paper. Second, a data log was provided by NCREL to the evaluation team for analysis of what portions of the database were being accessed and how frequently. Third, the AEA personnel responsible for conducting teacher training activities on the Internet in the regions were surveyed. Fourth, two questions were included on a follow-up survey of teachers who attended workshops and institutes sponsored by the project to assess their level of use of the database.

On-line Database Survey

Seven surveys were completed and responses were transmitted electronically from NCREL to the project's evaluation team. The surveys were completed by two K-12 teachers, a K-12 student, an AEA staff member, a K-12 computer coordinator, a research manager for a state agency, and a respondent from the federal government (See Appendix Y). Their responses are summarized below:

- **Three** had **attended Internet training** sessions.
- One of the teachers had accessed the database 2 to 5 times, and the AEA staff person had logged on between 5 and 10 times. The rest were using the database for the first time.
- **Three** of the respondents found the database **easy to access**, while **four** indicated it was **difficult to access.**
- **Six** indicated the database was **somewhat useful**, and the seventh that it was useful.
- One indicated the database did not meet their expectations, five indicated that it **partially met their expectations** and one indicated that it met expectations.
- Overall ratings of the database ranged from 3 to 8 on a ten-point scale, with two people giving it an eight. The overall **average rating was six**.
- When asked about the most useful aspects of the database, two respondents were unsure while two others felt it was a useful place to obtain information.
- Other information the respondents would like to see on the Iowa Database included:
  - Demographic and social information about Iowa, such as Census data.
  - ICN availability and usage.
  - A file of highest elected officials for all cities and counties in Iowa.
  - A link with the Iowa General Assembly, state agencies, and state universities.

Database User Logs

The Iowa Database has five major sections:

- Star Schools, which contains information about the Iowa project.
- ICN, which contains information about Iowa's fiber optics network, including class schedules, programming needs, ICN tips, and distance education information.
- State Reports, which contains information from the Iowa Department of Education including the Technology Commission Report, Phase III handbooks and plans, and state-reported data.
- Matchmaker, which contains information from the regions about personnel, staff development, and local school districts.
- World of Education, which provides access to numerous other educational databases.

NCREL provided the evaluation team with a user log for the Iowa Database that listed all users and what files they had accessed between April 1, 1994 (when the database became operational) and August 1, 1994. Based on the database user log provided by NCREL (summarized in Appendix Y), it appears that **264 persons accessed the database** during that time period. The points below summarize the types of users who have logged into the database.

- **Thirty-three accessed the database through Infonet and seven through Des Moines Net**.
- **Thirty-four users were from colleges in the state**, including Iowa State University, University of Northern Iowa, University of Iowa, Drake University, and Cornell College.
- **Thirty-six teachers and AEA personnel accessed** the database using passwords obtained from the Star Schools project.
- Two additional K-12 and two AEA users accessed the database with passwords not provided through the Star Schools Project.
- Other users included **22 from out-of-state colleges** and universities, one from a city library, 8 from **government entities** such as the Iowa legislature, NASA, the U.S. military, and the Iowa Department of Education, and 32 from **private companies** and other organizations.
- In addition, there were **87 users that were unidentifiable** from their address; 30 of these logged on but never accessed a file.

Individual users accessed the database from one to 24 times, although most persons had accessed the database only from one to five times. The points below summarize the primary files accessed in the database.

- The **ICN folder was accessed 228 times.** The most frequently accessed files were how to use ICN/tips, regional and state newsletters, graphics, listing of schedule of classes, and K-12 program offering needs.
- The **State Reports folder was accessed 180 times.** The most frequently accessed files were the BEDS documents for public schools and the Technology Commission Report.
- The **Matchmaker folder was accessed 141 times.** The most frequently accessed files were the personnel directory and the list of school districts by AEA.
- The **Star Schools folder was accessed 116 times** with the project summary the most frequently accessed file.
- The World of Education folder reported no access through August 1, 1994. However, this portion of the database was added during July.

Survey of AEA Personnel

Personnel from all fifteen of the AEAs responded to a telephone survey of those responsible for regional teacher training activities on Internet (Appendix Z). The results of the survey are summarized below.

- **113 formal and informal Internet training sessions were conducted by the AEAs** during the past year. The number of sessions per AEA ranged from two to 32. The types of session varied from two-day to half-day to one-hour training sessions. In some cases the training was offered over the Internet, although in most cases, it was provided in face-to-face sessions.
- **The majority of the AEAs do not collect information about the training session participants.** Those that did most frequently collected names of the participants and the school districts represented. One AEA recorded the passwords of the training session participants.
- **Two-thirds of the AEAs (10) did not provide a demonstration of the Iowa Database** during the Internet training sessions. One AEA tried to demonstrate it but was unable to access the system. The majority (9) indicated that they have provided information about the Iowa Database either during or following the Internet training sessions.
- **Four of the AEA coordinators reported that they are quite familiar with the Iowa Database**, ten said they were not very familiar with it, and one coordinator had never heard of the database.
- The coordinators were able to provide only estimates of the number of school districts and teachers who are active users of the Internet. **In all regions, the districts and teachers are actively using the Internet, although it is impossible to identify how many**, since it is not possible to monitor usage of the system.
- **Teachers in six of the AEAs connect to the Internet through NetIowa, four through the Star Schools slip to ISU, and five use both methods to connect.**
- The AEA coordinators offered a number of suggestions of **what to include on the Iowa Database.** The most frequently mentioned suggestions included **curriculum material** (6), followed by **information about computer software** (5), **a forum to enable teachers to "talk"** to one another (3), information about **teaching tips** and best practices for teaching (3), and **information about telecommunications and technology** (3).
- Other comments about the Iowa Database made by the AEA coordinators are summarized as follows: the **Iowa Database is likely to have a valuable role in Iowa**, but the training to date has been insufficient to result in widespread usage in the schools. **More information is needed about the database**, but it is important to keep in mind that implementation of the Internet in schools is a slow process and that equipment needs, teacher time, and costs need to be taken into account. It was suggested that the Iowa Database be part of the Iowa Department of Education.

Participant Follow-up Survey

During September, 1994, 710 Iowa teachers who had attended inservice workshops on distance education and institutes on curriculum reform sponsored by the IDEA were surveyed. A total of 325 responded (46%). The majority of respondents (54%) had attended activities during 1994 while slightly more than one-third (37%) had attended in 1993. Nine percent attended activities both years. Many had attended both an institute and a workshop (44%) while the remainder attended either a workshop only (28%) or an institute only (29%). (Information included in Appendix V)

- Slightly more than **one-fourth** (27%) of the respondents reported **attending an Internet training** session sponsored by the project and conducted through the local AEAs. These Internet workshops were to include information about the Iowa Database, although as indicated in the previous section, many did not.
- **Thirty-three teachers** (10%) reported having **accessed the Iowa Database**.

SUMMARY BY GOAL

Presented below is information about the accomplishments of the Iowa Distance Education Alliance by project goal. Six goals were identified for the project. Overall, the project was successful in completing all activities identified in the original proposal.

In order to meet deadlines for providing information to Project Management, some data were summarized prior to the end of the project. This report, therefore, may not include all activities that have occurred through September 30, 1994. Data for this report were collected from the Communication and Resources Clearinghouse (Clearinghouse), all 15 Regional Partnerships, and all components of the Teacher Education Alliance (TEA).

Goal 1

Distance Education in Iowa using the fiber optic telecommunications network will be conducted in a COORDINATED and systematic manner.

Goal one included four objectives with 11 activities. All objectives and activities were accomplished during the project.

- A national search was conducted and a **project director hired**.
- A **blueprint** for project completion was **developed**.
- Fifteen **regional partnerships were established** and regional coordinators designated.
- Regional **advisory committees were established** with representatives from public and private K-12 schools, Area Education Agencies (AEAs), and colleges and universities.
- **Regional plans were submitted** and approved in years one and two of the project.
- The **Teacher Education Alliance was established** and a coordinator identified.
- A retreat was held for project partners to enhance communications and **regular meetings were conducted** either face-to-face or over the Iowa Communications Network (ICN).
- Project Management established a newsletter (Connections) and A TEA **newsletter was developed** and mailed to 1,300 persons each month to provide information to project partners and participants in project activities.
- A **Communications and Resources Clearinghouse was established** and a director identified.
- Other personnel were identified to assist project management in coordination of the project.

Goal 2

Instruction using a statewide two-way full motion interactive fiber optic telecommunications network will be UNDERSTOOD and ACCEPTED by Iowans.

Goal two included four objectives and identified 26 activities. All objectives and activities outlined were accomplished during the project.

- **Electronic statewide meetings were conducted** by Project Management in cooperation with the Iowa Department of Education over the ICN.
- Several **videotapes were developed** by both Project Management and the TEA for use at presentations.
- A variety of **pamphlets and brochures were developed** by Project Management, the Regional Partnerships, and the TEA for promotional use.
- **Media events were coordinated** and information was provided to both print and broadcast media in the form of announcements and public interest stories. A clipping service was used to collect media stories concerning the ICN and the project.
- Regional **coordinators made presentations about the ICN and the project to more than 3,180 groups** around the state utilizing videotapes and printed materials developed by the project.
- Regional coordinators held **930 demonstrations of the ICN with nearly 15,000 Iowans attending** to allow citizens to see the system in operation. Demonstrations were provided to teachers, students, school administrators, school boards, ABE/GED coordinators, civic groups, and at local school open houses.
- A total of 1,385 **Iowans** completed surveys at the conclusion of demonstrations of the ICN. They **overwhelmingly agreed (84%) that the demonstrations were helpful** or very helpful in helping them understand the ICN. At the conclusion of the demonstration, **most agreed that interactive distance education will benefit K-12 education** (76%), will improve students' abilities to succeed in a technological world (79%), and that it is important in providing access to resources (81%). The majority also agreed that **all teachers should receive training in how to teach at a distance** (65%).
- **All regions held area-wide meetings of educators** with participants from K-12 schools, AEAs and community colleges. These meetings were held both face-to-face and over the ICN.
- ICN demonstrations were held at local schools with points-of-presence, and **printed materials** about the ICN and the project were **distributed to all school districts** in the state.
- Information related to the project was **published in local newsletters** and other written materials sent to students, parents, teachers and other educators in the state. These included AEA newsletters, local school newsletters, other education newsletters, registration materials, and school annual reports.
- A number of **articles were published in both state and national journals**.
- A number of activities were scheduled over the network. A total of **4,663 participants attended meetings and other activities on the ICN**. These groups included school boards, principals, teachers, K-12 students, GED students and instructors, and civic groups. In addition, 6,763 community college students took courses over the ICN.
- **Five student telecommunications clubs** were planned and 53 students are currently participating.
- A booklet listing **contact persons for each of the ICN sites** was developed and distributed.
- A **statewide conference was held for school board members**, coordinated by Project Management.
- **Materials** related to the project were **distributed at the Iowa State Fair**.

Goal 3

Iowa educators will be PREPARED and SUPPORTED so they can effectively teach students at a distance.

Goal 3 included four objectives and 19 activities. All objectives and activities were accomplished during the project.

- A **monograph** on distance education was written and **published.**
- Several **meetings were held for representatives of all preservice teacher education programs** in the state, including a day-long symposium, a three-day writing session to work on a curriculum guidebook, a two-day conference, and several colloquia conducted over the ICN for teacher education faculty. Participants from fifteen private institutions as well as the three state universities attended activities sponsored by the preservice component.
- An **Interactive Resource Guidebook was developed** and distributed to all preservice teacher education programs in the state to use in incorporating distance education into the preservice curriculum. **Fifteen private institutions and the three state universities report using the guidebook** in various ways. Most institutions reported integrating distance education into their curriculum at some level.
- **Nearly 1,000 teachers, administrators and other educators have been trained in the use of interactive distance education** through 34 three-day inservice workshops and four one-day workshops provided by the inservice component of the TEA at sites across the state.
- A **system manual was prepared** and distributed covering ICN operational issues, a videotape was compiled of exemplary teaching strategies, workshop guides and manuals were developed and distributed, videotaped and audio taped versions of the workshops were produced for distribution to the regions, and a computer-based multi-media program was developed for use in delivering the workshop content.
- **Graduate level courses in distance education were offered** by the state universities. Graduate credit was also offered by all three regent institutions for participation in institutes and workshops offered by the project.
- TEA representatives **collaborated with statewide curriculum reform groups** in developing curriculum materials to be used in teacher training.
- **Five-day institutes on curriculum reform** in mathematics, science, vocational education, literacy, and foreign language were held in each of the two years of the project. During year one, all of the institutes were held on university campuses. During year two, the majority of the activities were conducted over the ICN, including a two-day session integrating all of the curriculum areas. A total of **555 educators (92% classroom teachers) attended** the institutes. Participants were impressed with the quality of the speakers, appreciated the opportunity to interact with other teachers, and felt the information was applicable. Pre- and post-assessments indicate that participants learned a great deal.
- An additional **22 inservice courses and 142 inservice activities** were provided to K-12 teachers using the ICN as a delivery mechanism. These activities **reached nearly 3,000 teachers.**
- **916 teachers received released time to participate in project activities and 1,921 teachers received funding** for attendance at project activities.
- **Ten technical hotlines** were established in the state to assist teachers with technical difficulties encountered when using the ICN.
- Regional coordinators worked with teachers and students to evaluate instructional activities occurring over the ICN. **177 K-12 students completed surveys** about their interactive television experience. **Most were satisfied with the experience (83%)** and would take another course using interactive television (80%). Students particularly liked the opportunity to meet and interact with students in other parts of the state, the ability to take courses not available at their local school, and participation in a new learning experience. **Eight teachers also completed surveys and all agreed that interactive television instruction is an effective way to learn and that it was a positive experience.** Teachers particularly liked the opportunity to interact with students from other schools and the ability to try different teaching techniques.

Goal 4

Iowa schools will be CONNECTED to the Iowa Communications Network (ICN) and through it to other telecommunications networks.

All activities under the four objectives for Goal 4 were completed.

- Points-of-presence **(POPs) were identified** in each of Iowa's 99 counties.
- **Regional activities** related to connection to the ICN **were coordinated** through the Regional Partnerships.
- **Site meetings were held** to determine locations for fiber optic terminal equipment and other equipment needed to meet the technical specifications of the project.
- Regional coordinators **assisted in determining on-site fiber routing** and in determining necessary **site remodeling**.
- Guidelines and **specifications** for distance education classrooms **were provided** to all POP schools by the Regional Coordinators.
- Site plans were prepared and **money was provided to equip classrooms** at all POPs.
- Statewide **minimum standards were determined for equipment** and specifications were provided to all schools.
- Mechanisms for **centralized purchasing of classroom equipment** were developed and used.
- An **inventory of equipment** is maintained by Project Management.
- **Internet training sessions** were held by the Clearinghouse for AEA personnel.
- **75 Internet training sessions were conducted by the AEAs with more than 1,000 teachers** participating.
- The Clearinghouse worked with the North Central Regional Education Laboratory (NCREL) to **establish an Iowa Database on the Internet.**
- The **Clearinghouse conducted a needs survey** to determine needs of local schools for programming and provided this information on the Iowa Database.
- Regional efforts resulted in a **needs analysis conducted by superintendents of POP schools** with results placed on the Iowa Database.
- A **statewide needs assessment was conducted using focus groups over the ICN** to determine instructional, staff development, and administrative needs that could be addressed by use of the ICN.
- The project provided **access to the Internet for K-12 schools** through a slip connection at Iowa State University.
- Teachers were provided with passwords and **funds were allocated to pay for access time to Internet**.

Goal 5

Improved instruction in mathematics, science, foreign language, literacy skills, and vocational education will be IMPROVED and the number of opportunities will be INCREASED because of the activities of this project and the use of the Iowa Communications Network.

Three objectives and twelve activities were identified under this goal. All were accomplished during this project.

- **Course needs for local schools were identified** through both a survey of POP site superintendents and a statewide needs assessment using the ICN.
- **48 courses were offered** over the ICN **serving 868 K-12 students**, including courses in science, mathematics, foreign language, literacy, and vocational education. This compares with 16 courses serving 520 students that were offered via other interactive technologies at the beginning of this project (baseline data).
- **241 instructional events reached 6,272 K-12 students** through the ICN. This compares with 65 students served by interactive technologies prior to this project (baseline data). ICN activities

sponsored by this project allowed students to talk to experts, conduct experiments, interview legislators, connect to pen pals, participate in storytelling for elementary children, and more.

- Project Management provided opportunities for participation in several **programs offered by other Star Schools projects.**
- **19 special programs reached 506 students from underserved groups**, including Chapter 1 students, minority students, females in mathematics and science, non-native speakers, and special education students.
- **Two student mentoring projects** were set up over the ICN.
- **Five after-school hotlines** were planned to serve K-12 students in the five curriculum areas.
- **22 additional inservice courses and 142 additional inservice activities** were provided to teachers over the ICN reaching nearly 3,000 teachers.
- **916 teachers received release time and 1,921 received funding** for participating in activities sponsored by the project.
- **Ten mentoring or peer sharing projects** were established with **464 teachers participating.**

Goal 6

A program of RESEARCH and EVALUATION will be established to document the impact and effectiveness of the live, interactive, two-way interactive concept of distance education practiced in Iowa.

Two objectives and 11 activities were outlined under this goal. All activities were completed. Several of the activities will continue beyond the project period.

- A **Research and Evaluation Advisory Panel was established** with representatives from all project partners, as well as a classroom teacher, an evaluation expert, and a representative of the First in the Nation in Education (FINE) foundation.
- **Guidelines for data collection** were established, reporting forms were developed, **data were collected** from all project partners throughout the project, and **databases were established** using both a mainframe and micro computer. Software packages used include SPSS and Alpha Four.
- **Results** from data analyses were **provided to Project Management** and appropriate project partners throughout the project.
- A variety of **instruments were developed** by the evaluation team for data collection throughout the project.
- Both **qualitative and quantitative data were collected** throughout the project and included a teacher education technology survey; a telephone survey of teacher education institutions; evaluation of preservice activities; data collection from workshop and institute participants, including demographic information, evaluations of the activities, and pre- and post-assessments; regional demonstration surveys; surveys of students and teachers involved in ICN instructional activities at both the K-12 and community college levels; regional reporting forms; TEA reporting forms; surveys asking for views of the future from all project partners; follow-up surveys of workshop and curriculum institute participants; telephone interviews of AEA personnel; surveys of community college and AEA personnel; data collection from NCREL; an on-line survey in the Iowa Database; and a needs assessment using focus groups over the ICN.
- Qualitative data collected indicate that **teachers, students and citizens are more aware, K-12 schools are beginning to take initiatives in planning distance education activities, teacher inservice and networking is occurring, and collaboration between educational groups has increased as a result of this project**. In addition, **innovative instructional activities are occurring over the ICN as a direct result of this project** including such things as summer school for low-income K-6 students, student discussions with experts from such areas as human gene research and astronomy, storytelling for elementary students, alternative high school classes on parenting and drug and alcohol abuse, teen meetings on crime, and high school vocational education students learning about laser/electro optics technology.

- A **research plan was developed**, RFPs were distributed, and **16 research projects** examining distance education in Iowa were **funded**. An encyclopedia of this research was published.
- Several **articles have been published** related to research and evaluation activities of the project including articles in Tech Trends and the IRM Quarterly.
- Numerous **presentations have been made** to professional groups, including the Iowa Educational Research and Evaluation Association and the American Educational Research Association, about the project's research and evaluation activities.
- Research and evaluation **information** has been provided to Project Management for inclusion **on the Iowa Database.** The monograph on distance education prepared by the research team can be accessed on the Iowa Database.
- During each year of the project, three **external evaluators reviewed the project** by examining internal evaluation data, meeting with project partners, touring facilities, and observing ICN activities. **Conclusions were positive.**

CONCLUSION

The Iowa Distance Education Alliance (IDEA) is a partnership involving educational institutions across Iowa that received funding from the federal Star Schools Program to demonstrate the use of the Iowa Communication Network's (ICN) fiber optic technology for K-12 instruction. Iowa Public Television (IPTV), the Iowa Department of Education, the state's three public universities, fifteen community colleges, fifteen area education agencies (AEAs), and many local school districts participated in the project over a two-year period. The project focused on accomplishing six major goals: (1) coordinating use of the ICN, (2) informing Iowans about the ICN, (3) preparing teachers to use the ICN, (4) connecting schools to the ICN, (5) improving instruction in five content areas through use of the ICN, and (6) documenting the effectiveness of the ICN. During the first year of the project, activities focused on teacher training and public relations efforts as the state prepared for the fiber optic network to become operational. The fiber optic network was "lit" during the second year of the project and the project's emphasis then shifted to using the network to deliver programming for K-12 students and teachers, although training and public relations efforts continued.

Iowa's Star Schools demonstration project has been extremely successful. **All of the objectives and activities outlined in the IDEA proposal were accomplished** during the two years of the project, and the momentum begun with the project is continuing. Cooperation and collaboration among educational organizations in Iowa improved. **Innovative instructional activities are occurring over the ICN**. Students and teachers who used the system view it positively, as do other Iowans who have seen the system in operation. Some of the highlights of the project include:

Public Perceptions
- Over **75,000 Iowans have heard presentations** and received information about the ICN.
- Approximately **15,000 Iowans have seen the fiber-optic classrooms** in demonstrations.
- Among Iowans who have seen the system in operation, over three-fourths **(76%) believe interactive distance education will benefit K-12 education** in Iowa.
- **81%** of Iowans **believe the ICN is important in providing students with access to resources** such as computer databases and experts.
- 79% believe use of the ICN will improve Iowa students' abilities to succeed in a technological world.
- **65% believe all teachers should receive training** on how to teach at a distance.

K-12 Student Perceptions
- **7,140 K-12 students participated in instructional courses** and events over the ICN.
- Over 800 elementary students participated in a storyteller series over the ICN.

- Among K-12 students who have taken an ICN course, **83% were satisfied**.
- **80% of students who have taken an ICN course would take another one** and 75% would tell their friends to take one.

K-12 Teacher Training

- **2,866 K-12 teachers participated in inservice courses** and activities offered over the ICN.
- **555 K-12 teachers participated in institutes on curriculum reform** in mathematics, science, literacy, foreign language, and vocational education sponsored by the IDEA and rated these institutes positively.
- Approximately **900 Iowa educators participated in hands-on workshops** to learn how to use the ICN and nearly 90% rated the workshops as excellent.

K-12 Teacher Perceptions

- **K-12 teachers want their schools to be connected** to the ICN; 96% of teachers participating in IDEA activities reported that having an ICN classroom in their building is important.
- Among teachers participating in IDEA training, **21% have now used the ICN** for instructional purposes.
- 100% of K-12 teachers surveyed who have used the system felt distance education is an effective way to learn.
- **100% of K-12 teachers** who used the ICN **found the equipment easy to manage** while teaching.
- Most teachers (75%) found that remote site students learned as much as students in the classroom with the teacher.
- 88% would encourage their colleagues to teach over the ICN.

K-12 Internet Use

- **1,126 K-12 teachers received training in how to use the Internet**.
- The IOWA Database, an electronic clearinghouse on the Internet developed as part of the Iowa Star Schools project, is being used by Iowa educators.

Teacher Education

- **82% of the private colleges** in Iowa **believe distance education is important** to include in preservice teacher education.
- Most of the private colleges (82%) were connected or plan to connect to the ICN.

As with any innovation, acceptance of the system as an integral part of K-12 education will take time. Implementation of the IDEA project occurred at a slower pace than originally anticipated, and although much effort was expended in the area of public relations, efforts to keep Iowans informed and to help educators realize the potential of the ICN remain an area for emphasis. Use of the ICN will continue to evolve, and as evidenced by the IDEA evaluation findings, **continued success may hinge on future developments in several key areas**.

Access to the system

The Iowa Star Schools demonstration project has been so successful that **levels of demand for ICN time have increased rapidly, often exceeding capacity**. Demands for access to the system, both in terms of physical connections (sites) as well as availability and access to current ICN classrooms has surpassed all expectations. The level of demand has created scheduling difficulties not previously anticipated.

- Action by state government is needed to continue to expand the network. IPTV and the regional schedulers at community colleges will need to continue to provide leadership for the evolving scheduling process.

Policy Issues

Critical **concerns for K-12 teachers include additional planning and released time** for distance education instructional activities and additional compensation for teaching courses over the ICN.

- District and/or regional and/or state policies need to be determined for teaching over the ICN. The IDEA partners have recommended that the Iowa Department of Education take a leadership role in initiating discussion of these issues.

Operational Issues

K-12 operational **issues include coordination of common calendars and class schedules** across school districts, the role of the facilitator in the remote classroom, and local costs for maintaining ICN facilities.

- Districts and/or regional and/or state policies and procedures need to be determined to enhance operation of the ICN. Appropriate educational groups to be involved in the discussion of these issues include the Iowa Department of Education, community colleges, AEAs, and local school districts.

Teacher Inservice

Teacher inservice was an integral component of the IDEA project and contributed significantly to its success. The **workshops to train teachers to use ICN equipment were extremely effective**. The institutes held to inform teachers about current reform efforts in key curricular areas were received favorably. Institute participation increased during the second year of the project and participants appreciated the convenience of inservice training provided over the ICN. Significant interest in the Internet training was also evident.

- Hands-on training for teachers in the use of the ICN and the Internet should be continued in a systematic and coordinated fashion, and equitable and inexpensive Internet access for all K-12 schools should remain a goal. The ICN should also continue to be used as a vehicle for providing teachers with opportunities to upgrade their knowledge and skills in content areas. The IDEA partners recommend that the universities and AEAs take a leadership role in the area of inservice.

Preservice Teacher Education

Information was provided and **efforts were made to integrate distance education into the preservice teacher education programs** across the state beyond the awareness level. There is a need for increased faculty involvement and training and increased access to ICN facilities.

- Opportunities for learning about distance education should continue to be provided for teacher education faculty and administrators. The Iowa Association of Colleges of Teacher Education (IACTE) appears to be a viable forum for initiating discussion of the role of distance education in teacher education.

Information Access and Coordination

Educators across the state are more aware of the ICN and the capabilities of distance education, but many perceive a **need for more information**, perhaps centralized, about the system and about activities that are available on the system.

- Information access and coordination should build upon current efforts by the Communication and Resources Clearinghouse, community colleges, AEAs, and other IDEA partners and alternative methods of providing information should be explored. IDEA partners recommend that the Clearinghouse take a leadership role in providing information to educators and students.

Collaboration

Collaboration and coordination among educational organizations contributed to the success of the IDEA project. **Continued collaboration and cooperation will be necessary** if the system is to be used to its fullest potential. There is general agreement among the project partners that the IDEA should continue and general agreement as to the roles of the partner groups.

- The IDEA partners recommend that IPTV take the responsibility for continuing the partnership and for initiating further discussions of the roles and responsibilities of the participating educational organizations.

APPENDIX A

Summary of Regional Coordinator Reports

Coordinator Report Summary by Region

REGION ->	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
# groups provided publicity	103	171	256	127	22	495	57	62	117	507	178	316	132	278	359
# local articles	13	19	13	34	7	27	1	6	12	23	22	32	35	10	25
# schools with info in annual reports	8	2	2	6	0	12	0	0	2	1	3	0	8	0	2
# partner meetings	3	4	7	8	1	4	5	5	1	6	4	7	7	4	8
# meetings over ICN	0	4	2	4	0	1	2	0	1	0	4	7	6	3	5
# demos held	60	82	84	61	22	34	30	35	28	71	111	45	65	100	102
# demo participants	1252	1170	820	847	410	907	826	501	450	886	1263	788	782	1748	2344
# demo sets received	12	0	0	6	5	1	8	4	3	18	1	0	0	4	8
# surveys returned*	281	0	0	72	127	53	179	34	46	181	106	0	0	110	120
# of K-12 courses	2	6	1	6	0	3	2	0	10	2	3	3	4	5	1
# students involved	41	47	15	136	0	50	40	0	157	26	97	67	110	62	20
# courses surveyed	0	0	0	2	0	3	4	0	5	0	0	0	0	2	0
# surveys returned	0	0	0	2	0	23	72	0	55	0	0	0	0	25	0
# student activities	2	18	0	9	0	99	9	5	16	6	41	7	11	15	3
# students involved	100	508	0	66	0	2568	150	0	721	121	1082	202	400	241	113
# inservice courses	3	0	4	0	0	0	0	0	7	0	2	1	0	1	4
# teachers involved	60	0	130	0	0	0	0	0	190	0	36	21	0	20	35
# inservice activities	0	17	0	0	5	20	21	4	24	0	11	7	5	22	6
# teachers involved	0	307	0	0	44	355	0	10	770	0	247	183	50	300	108
# participants in other K-12 uses	95	304	42	95	3	296	125	102	15	25	277	441	290	167	303
# community college participants	487	1084	0	127	261	173	180	63	2687	147	575	175	63	329	412
# civic users	0	80	92	159	0	125	95	260	1	0	0	0	76	0	150
# other users	5	66	2	0	0	343	15	0	20	70	350	0	0	76	98
Telecomm Club	N	N	N	N	N	N	N	Y	N	Y	N	N	Y	Y	Y
Peer Tutoring	N	N	N	N	N	N	N	Y	N	N	N	N	Y	N	N
Homework Hotline	N	Y	N	N	N	N	N	Y	Y	N	N	N	N	Y	Y
Underserved Programs	0	0	2	0	0	9	0	0	1	0	0	0	0	7	0
# teachers receiving release time	38	42	118	84	77	44	66	0	0	76	50	71	61	47	142
# teachers receiving money	67	69	324	116	155	107	112	58	120	145	141	110	237	79	81
# Internet sessions	1	4	1	2	14	6	5	3	0	20	8	2	1	2	6
# participating	20	126	5	7	292	104	25	14	0	165	110	60	30	130	38
Peer Educators Prog.	N	Y	N	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y
# participating	0	36	0	2	25	6	29	29	3	22	0	8	91	96	117
Teacher Hotline	N	Y	Y	N	Y	N	Y	Y	Y	N	Y	N	Y	Y	Y

* - 76 surveys returned by Iowa Public Television

REGIONAL REPORT FORM

This is a summary of the reports sent in by the regional coordinators. It represents the information that the regional coordinators of the Star Schools Project submitted throughout the duration of the project.

Star Schools Publicity

Note the number of groups in each category provided with information and indicate the type of information provided. **Type of information may include flyers, brochures, videos, speakers for meetings, or other.** If no groups in a category have been provided with information or speakers, place a '0' on the appropriate line. **Goal 2: Objectives 2.1(e,f,g) ; 2.2 (c); 2.3 (a,b,d,f); and 2.4 (a,d)**

Group Type	*Number of Groups*	*Type of Information*
Civic Groups	398	Brochures, Speakers, Videos, Flyers, Printed Materials, Demos
Local Schools	893	Brochures, Speakers, Newsletters, Flyers, Presentations, Folders, Demos
Student Groups	222	Speakers, Videos, Flyers, Brochures, Printed Material, Folders, Bookcover
Teacher Groups	422	Speakers, Brochures, Videos, Flyers, Presentations, Newsletters, Meetings
Administrator Groups	310	Speakers, Brochures, Videos, Flyers, Presentations, Newsletters, Demos
Parent Groups	42	Brochures, Speakers, Videos, Demos, Newsletters, Info Packets, Flyers
ABE/GED Coordinators	65	Speakers, Brochures, Demonstrations, Videos, Newsletters, Pamphlets
School Boards	226	Speakers, Brochures, Flyers, Demos, Presentations, Newsletters, Videos
Chapter 1 Sites *	397	Brochures, Videos, Speakers, Flyers, Newsletters, Presentations, Demos
Other	205	Speakers, Meetings, Presentations, Brochures, Videos, Newsletters, Flyers, Press Releases, TV & Radio
TOTAL	**3,180**	

*** Chapter 1 Sites are defined as concentration site schools. The 93-94 list for your region is attached.**

Goal 2: Objective 2.3(d,e)

Number of articles related to Star Schools in local education newsletters

LEA 66 AEA 140 PTA 0 Other 73

Number of schools with Points of Presence(POPs) providing information about Star Schools and/or distance education opportunities in the following:

Registration Materials 63 Annual Reports 46

Goal 1: Objective 1.2

Number of Regional Partnership meetings held 74

Number of these held face-to-face 35

Number of these held over the ICN 39

41

ICN Demonstrations

List the number of ICN demonstrations held for each type of group and the total number of participants. If no demonstrations were given for a category, place a '0' on the appropriate line. The definition of a demonstration includes the use of technology to simulate a distance learning environment to a group of people. Demonstrations are held at POP sites. Other types of presentations should be included in the publicity section.

Goal 2: Objective 2.1 (g,h); 2.2 (b); 2.3 (a,c); and 2.4 (d)

Group Type	*Number Demonstrations*	*Number Participants*
Civic Groups	89	2,135
Local Schools	137	2,152
Student Groups	93	1,949
Teacher Groups	159	2,747
Administrator Groups	78	1,156
Parent Groups	19	620
ABE/GED Coordinators	17	97
School Boards	73	562
Chapter 1 Sites *	172	2,440
Other	93	1,136
Total	**930**	**14,994**

Sites Utilized for Demonstrations: ***(List the sites)***

REGION	Sites
1	All Points of Presence
2	All Points of Presence
3	All Points of Presence
4	All Points of Presence
5	Sites Not Reported
6	All Points of Presence except Iowa Falls
7	All Points of Presence
9	All Points of Presence except Maquoketa
10	All Points of Presence
11	All Points of Presence except Newton and Marion
12	All Points of Presence
13	All Points of Presence
14	All Points of Presence
15	All Points of Presence
16	All Points of Presence

SHARED K-12 COURSES AND ACTIVITIES

COMPLETE THIS SECTION FOR K-12 COURSES ENTIRELY DELIVERED USING INTERACTIVE TV. For course sharing among schools in different regions, count only those courses originating from your region.

Please note the number of students served in each content area through shared distance education courses, the number of courses, and the number of sites connected. For categories where no courses were shared within the region, place a '0' on the appropriate line. **Goal 5: Objective 5.1 (b,d)**

Course Area	*Number Courses*	*Number Students*
Science	6	114
Mathematics	12	278
Foreign Language	14	219
Literacy	2	26
Vocational Education	2	38
K-12 Inservice	22	492
Other	12	193
TOTAL	**70**	**1360**

COMPLETE THIS SECTION FOR PARTIAL K-12 COURSES OR ACTIVITIES (not entire courses) DELIVERED USING INTERACTIVE TV. For activities shared among schools in different regions, count only those activities originating from your region.

Please note the number of students served in each content area, the number of activities, and the number of sites connected. For categories where no classes were shared within the region, place a '0' on the appropriate line. **Goal 5: Objective 5.1 (b,d)**

Course Area	*Number Activities*	*Number Students*
Science	33	1,261
Mathematics	10	162
Foreign Language	54	962
Literacy	59	1,560
Vocational Education	28	907
K-12 Inservice	142	2,374
Other	57	1,420
TOTAL	**383**	**8,646**

Other Education Use

This section should be used to report activities that are not K-12 instruction or inservice (reported on previous page). Uses could include meetings of educational groups, community college courses and activities, GED courses, and civic group use of the system for educational events. REPORT ONLY THOSE EVENTS ORIGINATING IN YOUR REGION.

Indicate the number of system uses and the number of participants served. If there are no uses to report, place a '0' on the appropriate line. **Goal 2: Objective 2.1 (3); 2.3 (f); 2.4 (a,c,d)**

User Group	*Number of Participants*
GED	80
School Board	202
Principals	399
Teachers	1,445
K-12 Students	454
Community College	6,763
Civic Group	1,038
Other	1,045
TOTAL	**11,426**

44

Student/Teacher Support

Goal 2: Objective 2.4 (e)

1. Plan developed for K-12 student communication clubs Yes 5 No 10

Number of clubs established 5

Number of K-12 students participating 53

Goal 5: Objective 5.2 (a)

2. Plan developed for establishing before/after school or summer peer tutoring projects for K-12 students Yes 2 No 13

Number of students participating None Reported

Goal 5: Objective 5.2 (c)

3. Plan developed for establishing an after-school hotline for underserved K-12 groups in the five content areas Yes 5 No 10

Number of hotlines established 5

Number of calls received this reporting period None Reported

Goal 5: Objective 5.2 (d)

4. Number of special programs offered to meet the needs of underserved groups 19

Number of participants 506

Goal 3: Objective 3.4 (a)

5. Number of teachers receiving released time to participate in distance education training. 916

Number of teachers receiving funding for attendance at Star Schools inservice workshops or curriculum institutes. 1921

Goal 4: Objective 4.3

6. Number of Internet training sessions held 75

Number of educators participating in training 1126

Goal 5: Objective 5.3 (c,d)

7. Mentoring/peer educator program established for teachers teaching via distance education Yes 10 No 5

Number of teachers serving as mentors 464

Goal 3: Objective 3.4 (b

8. Hotline established to deal with difficulties experienced by teachers using distance systems Yes 10 No 5

APPENDIX B

Regional Partnership Survey

Star Schools Regional Partners Survey

Completed by: Regional coordinator ____________________
AEA representative ____________________
Community college representative ____________

AEA/Community College Region # ____________________

1. What have been the positive impacts of the Star Schools Project in your region? Please be specific.

2. What have been the difficulties or barriers of the Star Schools Project in your region? Please be specific.

3. What do you anticipate as the greatest challenges for implementation of year two of the Star Schools Project?

4. How prepared is your region to implement year two of the Star Schools Project? (Circle one of the *)

Strongly Prepared	Moderately Prepared	Slightly Prepared	Slightly Unprepared	Moderately Unprepared	Strongly Unprepared
*	*	*	*	*	*

Summary of Findings from Star Schools Partners Survey

All Star Schools Regional Coordinators were asked to respond to a four question survey in September, 1993. They also were asked to request the AEA and Community College persons most closely associated with Star Schools in their region (other than themselves) to complete the survey. All 15 regional coordinators returned the survey, as did 13 AEA persons and 4 community college persons. Responses were summarized and categorized. Presented below are the findings. The most frequently mentioned responses are listed in order of frequency. Those responses mentioned less often are listed under "Other."

What have been the positive impacts of the Star Schools Project in your Region?

Coordinators

1. Teacher training/workshops and institutes
2. Increasing public awareness/informing the public
3. Increased cooperation and communication/strengthening relationships among regional partners

Other

Enhancing educational opportunities
Purchase of equipment
Course sharing
Facilitating state-wide communication
Better use of educational resources

AEAs

1. Teacher training/workshops and institutes
2. Increased cooperation and communication/strengthening relationships among regional partners
3. Increasing public awareness/informing the public

Other

Money
The excitement and desire created
Development of materials
Hiring of staff
Create a forum of discussion for schools

Community College

1. Teacher training/workshops and institutes
2. Increasing public awareness/informing the public

Other

Increased cooperation and communication/strengthening relationships among regional partners
Purchase of equipment
Development of materials

What have been the difficulties or barriers to the Star Schools Project in your Region?

Coordinators

1. Lack of information from the state level
2. Part III schools feeling left out
3. The fact that the POP sites were not operational
3. Lack of coordination and leadership

Other

Policy issues: teaching loads, preparation time, teacher pay
Politics
Costs of using the system
Teacher concerns: effectiveness of distance education, difficult to use, amount of time needed, is it a fad?
Scheduling: (1) at the school level, (2) at the state level
Negative publicity/cynical attitudes
Turf issues
Uninformed public
Lack of needs assessment information
Differences in funding for the institutes
Distance teachers had to travel for institutes
Negative feedback from summer institutes
Lack of a full time coordinator
Lost momentum

AEAs

1. Lack of communication to the local schools
2. Lack of coordination and leadership
3. Uncertainty of Part III

Other

Money issues
Scheduling: (1) at the school level, (2) at the state level
Lack of information from the state
Politics
Lack of knowledge
System not operational
Inequity in access
Technical problems
Lack of focus on other uses of the fiber
Clearinghouse not operational
Varied quality of institutes

Community College

1. Lack of communication/information flow
2. Lack of cooperation between AEA and Community College

Other

Money arrived late
Politics
Time

What do you anticipate as the greatest challenges for implementation of Year Two of the Star Schools Project?

Coordinators

1. Scheduling: (1) at the school level, (2) at the state level
2. Part III uncertainty
3. Getting courses on the ICN

Other

- Policy issues: teaching loads, preparation time, teacher pay
- Training more teachers
- Maintaining enthusiasm
- Communication and information sharing
- Publicity
- Need for leadership
- Money
- Identifying needs
- Generating more local ownership
- Equity between haves and have nots
- Equitable distribution of money for teacher training
- Overcoming negative reaction to summer institutes

AEAs

1. Scheduling: (1) at the school level, (2) at the state level
2. Identification of courses/getting K-12 courses on the system
3. Part III uncertainty
3. Public awareness

Other

- Communication and planning
- Teacher training
- Money issues
- Maintaining quality
- Overcoming teacher fears
- Taking advantage of data possibilities with the fiber
- Lack of K-12 participation in advisory groups
- Politics
- Need for more classrooms
- Technical problems
- Maintaining enthusiasm
- Need more "stuff" from the state level: curriculums, guides, programming

Community College

1. Lack of communication/information flow
2. Part III uncertainty

Other

- Scheduling (not specified)
- Getting elementary teachers involved
- Giving teachers practice time on the system

How prepared is your region to implement Year Two of the Star Schools Project?

Answers were on a 6 point scale with 1 (strongly unprepared) the lowest and 6 (strongly prepared) the highest.

Coordinator average:	**5.20**
AEA average:	**4.65**
Community College average:	**5.50**

APPENDIX C

Regional Coordinator Surveys

Regional Coordinators Survey
Summary of Results - January, 1994

Question 1 **Briefly describe any K-12 activities using the ICN that have occurred in your region.**

REGION 1

- Students from St. Anthony's School in Dubuque traveled to the Peosta Campus of Northeast Iowa Community College to use the ICN classroom and be a part of Tom McManigal's Student Voices program on drugs.
- Students from New Hampton School arranged to meet over the ICN with UNI professor Sharon Smaldino for a thirty minute orientation session.
- Classes for area high school students. We presently have two high school classes being taught over the network. Probability and Statistics is taught from 7:30 - 8:15 daily and originates from New Hampton. Dr. Maureen Busta teaches the class to sixteen students located in Cherokee, Cresco, Calmar, Manchester, New Hampton, and Oelwein. Survey of Health Occupations is taught by Nancy Meyer. It is also a daily class taught from 11:30-12:15, originating at our Calmar campus and received at Waukon, Cresco, New Hampton, Oelwein, and Manchester. There are twenty-five students in this class.
- We have given live demonstrations of the ICN systems to the entire West Delaware (Manchester) and South Winneshiek (Calmar and Ossian) faculties, as well as live demonstrations for math and social science teachers in the Western Dubuqe district. All of the school boards of our site schools, with the exception of New Hampton, have taken part in a live demonstration of the network. The AEA board and all area superintendents have attended live demonstrations.
- The AEA superintendent's group used the network for their monthly meeting in February.
- We have used the network for meetings with high school principals on three occasions.

REGION 3

- Fifteen high school interdisciplinary student teams sharing their action plans and activities.
- Primary Program- Sixty primary educators dialogue on the system using the newest, research-based, developmentally appropriate curriculum available. This is being done on a monthly basis so teachers have time to implement in the classroom and then return to reflect and share.
- K-12 TAG teachers and coordinators using the system to study and discuss current issues in the area of Gifted Education including the National Excellence Report released by the United States Department of Education.
- Chapter 1, Resource Teachers, Primary Educators exploring reading strategies for intervention with struggling readers in the primary grades.

REGION 4

- Students from Sheldon High School, Sibley-Icheyedan High School, and Central Lyon High School are taking college classes on the ICN through the Post-Secondary Enrollment Options Act. They are mostly high school seniors, but there is one high school freshman from Sibley taking Cultural Anthropology (TAG-qualified).
- Demonstrations of how the system works were given to the K-12 teachers from our Point of Presence Schools: Sheldon, Sibley, and Rock Rapids.

REGION 6	• Russian language classes 5 days a week, M'Town and Spirit Lake High Schools. • Native American Colloquium (see description under question two). • Storybook Time - introduction to network by Gary Zmolek to grades 1-5 of Montour Elementary - storybook pictures and storytelling. • Iowa Falls Teacher Demonstration - from Grinnell site, Grinnell drama teacher led the Iowa Falls High School faculty in memory association exercises. • Teacher Workshop on ICN training between Iowa Falls and Marshalltown sites. • An Iowa Valley Continuing Education offering, but for K-3 children: Magic, Magic, Magic! The children learned how to do several magic tricks with items found in the home. • Marshalltown/Grinnell Middle School Science Class, Sixth Grade- Grinnell class demonstrated circuitry projects they had built (one a fan)- the Marshalltown class conducted a genetic survey of the Grinnell class.
REGION 7	• Foreign language proficiency testing for K-12 language teachers. • Ed Augustine speaking on two dates to three schools about international trade. • Demonstration of Probabilities from UNI to Grundy Center. • Gayle Allen and Ruth Palmer have a partnership from Ames (ISU) to Immaculate Conception to show and teach ISU education students how seventh and eighth graders read.
REGION 9	• Superintendent in Maquoketa has hosted and organized meetings over the ICN with all other superintendents in the state who have POP sites in their districts. They are planning program sharing as well as common calendars and class times.
REGION 10	• There is a full complement of college credit courses offered over the ICN and area students are allowed to take these courses if they wish. • There were 3 staff development courses offered over the ICN by the AEA. One was a single session course and the other 2 were 5 sessions each. • We held one meeting on the ICN with local administrators to plan the K-12 schedule and offerings for the ITFS classes to be offered in 1994-1995. High school curses continue to be offered via ITFS because there are no high school ICN sites in Area X. • We held one meeting on the ICN with local administrators and teachers to plan the K-12 staff development sessions for the Spring of 1994. These sessions are offered each Wednesday afternoon over ITFS, again because there are 25 ITFS sites in Area X high schools and no ICN sites. • The AEA instructions division held a meeting in the Kirkwood ICN classroom and became familiar with the system. • County cluster meetings were held in each county of Area X and ICN demonstrations were given.
REGION 11	• Most K-12 activities are demonstrations to groups of teachers, and one or two local workshops on how-to and hands-on.

REGION 12

- October: Denison Teacher Demonstration, "New Standards" DPI meeting, AEA Joint Advisory Committee Meeting.
- November: Superintendents Meeting, AEA Laser Disc Demonstration, Galva/Holstein & Mapleton course sharing, Elementary Principals (K-8) AEA Meeting, Secondary Principals AEA Meeting, Industrial Technology class.
- December: "Structural Engineering" Adel H.S. class, Schleswig Middle School, ICN teacher demonstrations, "Technology Department Joint Project", WITCC & AEA Board tour/demo of Sioux City classroom, Superintendent's Meeting from Maquoketa, Student Senate Officers' Meeting, Teacher/Community group demo, AEA Laser Disk Training, TAG Presentation, POPs Principals Meeting.
- January: "Technology Project", Superintendents Meeting, Communication Class, "Student Voices" IPTV, Area Superintendents Meeting, Manufacturing Technology Seminar, Teacher Demo ICN Classroom, "Applied Communications", "Meet with Rep. Mike Peterson" (Denison 5th grade class)., Corwith High School students interview Phil Hay.

REGION 14

- January 28 - Dr. James Van Allen presented a 2 hour program on "Manned/Unmanned Space Flight" where he discussed why, in his opinion, unmanned space flight proved to be more advantageous than manned space flight. Junior high science students from Mount Ayr and Creston were able to interact with the famous Iowan from the University of Iowa by asking him questions on space flight and his experiences as a scientist. While the students from Creston and Mount Ayr interacted with Dr. Van Allen other students from surrounding schools in Area 14 listened in to the discussion.
- February 4 - In a follow-up program, Dan Miller and Nancy Sturms of the Des Moines Science Center came to Creston and presented to more science students from Creston and Mount Ayr. Their program focused on the advantages of manned space flight as opposed to Dr. Van Allen's views. The students were able to formulate their own opinion on manned/unmanned space flight.
- A debate posing manned vs. unmanned space flight has been planned for the science students in the near future where they will take what they have learned and put it to the test!
- Monthly superintendent meetings are held between Area 14 high school POP sites and other sites across the state. This has given our superintendents a chance to talk to and share ideas with other administrators involved in the Star Schools Project providing a valuable information resource.

REGION 15

- We have conducted a number of different demonstrations over the system for Points and non-Points of Presence Teachers, Administrators and School Boards. These have been very successful and have given the participants the ability to see this technology in use.
- We held an open house at 4 of our 10 Points of Presence so they could invite students, teachers, parents, and community leaders, etc. into their classrooms for a demonstration of this system. This was very beneficial for all involved and even earned a spot on KTVP's 10 p.m. News. People walked away from this with a positive feeling about Star Schools and the ICN. A total of about 70 people attended.
- We have and will be holding meetings over the ICN for teachers who have attended one of the Workshops or institutes. These have been beneficial for the participants, and are giving them the ability to share ideas as well as practice using the ICN. These meeting will continue, and allow teachers in Area 15 to work together at mastering this new technology.
- We have also developed a number of different publications, such as a newsletter and different brochures that explain the ICN, Star Schools and Distance Education in general. We had also worked hard to develop positive relations with the different newspapers, radio and television stations in Area 15. This has allowed us to get excellent positive coverage when it come to various events in Area 15 as well as the state.

REGION 16

- Ft. Madison Jr. High observed and talked to Esterville Middle School regarding the middle school concept.
- Mt. Pleseant Jr. High observed and talked to Indianola Middle School regarding the middle school concept.

Question 2 **Highlight one or two of the most interesting or significant activities.**

REGION 1

- I think the most significant activity in this region is being able to offer the two high school classes second semester. It took a tremendous amount of planning for the schools and a lot of cooperation on their part. We were also able to add Cherokee as a receive site in response to that district's need for a higher math class for one of their students. Area principals are planning for five hours of high school courses on the network for the coming school year. In addition, we are exploring ideas for Iowa history class for grade five.

REGION 4

- The Northwest Iowa Writer's Conference is held on Wednesday afternoons for Creative Writing Classes and their instructors. Sibley and Rock Rapids are the initial two schools, and others are being invited to participate. The students orally read and critique one another's work and the teachers network on assessment of writing.

REGION 6

- Our most significant and successful programming is Russian language classes originated by Marshalltown High School and shared with Spirit Lake High School. Three classes a day, five days a week (Russian I, Russian II, Russian III/IV), with a total of 55 students. The most "fun" so far: when the class prepared and played a Russian Jeopardy game between the sites.
- For "special" programming, our Native American colloquium originated by South Tama High School and shared with Britt sixth grade social studies at two receive sites: The Native American students prepared the curriculum:
    - a videotape of the reservation and their homes
    - a language lesson on colors
    - a presentation and explanation of Sac & Fox traditional clothing
    - a tribal story presentation
    - a historical presentation
    - a question and answer period in which the Britt students interviewed the Native American students.

  As an aside to the colloquium, the Iowa Falls and Grinnell sites were added as "silent partners" for an observation demonstration. Twelve different classes of students and a steady stream of area civic leaders, educators, and school board members attended. We made the most of the occasion to demonstrate the ICN.

REGION 7

- Very creative uses of demonstrations for K-12 curriculum.
- People using system for meetings, training, enrichment, etc.

REGION 9

- Staff development opportunities hosted by AEA.

REGION 10

- One of the most significant happenings in Area X has been the staff development offerings over ITFS via the Edutrac program. Edutrac sessions occur on Wednesday afternoons from 3:45-4:30. This time allow most teachers the opportunity to attend the sessions at least occasionally. The programming is planned by area administrators and teachers along with AEA and Kirkwood personnel. We try to plan sessions for all levels of teachers and all types of school personnel from administration to food service. The attendance has been averaging 40 with a range of 10 to 100. This is a wonderful concept and one we would like to take statewide if we had time on the ICN.
- A second activity that is happening in Area X is the development and offering of an Environment Science course via distance presentations. The course is excellent and we are able to demonstrate the possibilities of distance education through the many various activities of this class.
- A third activity that deserves mentioning is our Friday career presentations. We offer a career development course over ITFS that includes a guest speaker every Friday. These speakers are suggested by students and school personnel in Area X. The speaker presentations are available to their class and any other high school student in Area X. We have been able to attract several students other than those in our class for the sessions or to watch tapes of the sessions. This then helps spread the advantages and possibilities of distance education to many more people.

REGION 11

- Tom Baughman's communications technology class at Adel-DeSoto-Minburn held a structural engineering contest with Maple Valley Community High School over the ICN. Teams composed of students form each location collaborated to design and construct bridge structures using balsawood, entirely over the fiber network. Each team made half a bridge. The bridge sections were united (by mailing them to each other), so that each site had some bridges to test.

- G&T 2nd and 3rd graders from Des Moines and Pella shared their individual projects over the network. The Pella students showed a video with original music, read their poetry, showed an ABC book of endangered species; Des Moines students had made three foot dolls and told the biographies of famous women (Helen Keller, Princess Anne, Maria Martinez, Linda Bloodsworth Thamasen, and Harriet Tubman).

REGION 12

- The G-H/Mapleton course sharing was the first K-12 activity on the ICN in Region 12. Two brothers, Jim Christensen at Galva-Holstein and Brad Christensen at Mapleton, got their classes together to share science projects. This activity received extensive newspaper coverage in this area.
- Meeting of student senate officers was open to all high schools in Region 12. About 15 schools brought groups into all 6 area ICN classrooms - there were about 45 to 50 students along with their advisors. After a brief orientation on the network the students spent the bulk of the two hours sharing ideas and opinions on school activities. Consensus was that it was a very useful meeting and many expressed a wish to "do it again soon".
- "Applied Communications" class was the first and is still the only K-12 course being offered on the network in Region 12. It is being team-taught by two principals, Jim Patera in Le Mars and Steve Oberg in Mapleton. These gentlemen are the ICN contact people in their counties, they are both on our Regional Telecommunications Council and both have been very active in spreading awareness of the ICN.

REGION 14

- The two most significant and successful activities have been the Van Allen and Science Center programs

REGION 15

- This spring Area 15 is teaching two high school level courses involving 5 schools. Van Buren (Keosauqua) High School is sending Advanced Placement English to Chariton High School. Albia High School is sending Statistics and Probabilities to Wayne Community High School(Corydon) and Davis County High School (Bloomfield). These courses are being well received by all, and have really increased area-wide interest in the ECN/STAR Schools.
- Rich Bartels from Albia High School has also been working with Pat Berger and other instructors from Indian Hills via the ICN. Once a month, students from Rich's Principals of Technology course communicate with Pat and other IHCC instructors via the ICN. This has been a very beneficial project for all involved. The students enjoy it because it gives them the opportunity to get information from professionals in the fields they are studying.
- Southern Prairie AEA 15 has also developed a series of staff development workshops using the ICN. These workshops are held from 4 to 9 p.m. on Monday nights and will run throughout the course of the spring semester. They cover all different subject matters, and have given teachers in the area the ability to communicate and learn without leaving their home counties.

REGION 16

- Southeast Iowa Tech Prep Consortium presentation statewide connecting educational institutions, business and industries, community leaders, and legislators.

Regional Coordinators Quarterly Report
Open-Ended Survey
June, 1994

During Year Two, what have been the positive impacts of the Star Schools Project in your region?

The positive impact of this system is demonstrated when, gradually, the K-12 districts take some initiative and begin to ask for meetings to be scheduled between them and other areas. The more the districts use the network, the more ideas they generate for future use. One school had a teacher from another area teach an Authentic Assessment course over the network in early June. Everyone was pleased not to have to drive. Two schools have used the network for Workplace Readiness (Vocational Education) meetings with districts outside the area. TAG teachers in the area are using the network for statewide meetings. The Media Director at our AEA is using the network in the fall for meetings across the state. I think it is an established fact that the high schools in the area expect some high school classes to be offered on the ICN for the coming year. They still leave it up to someone else to provide the teacher in most cases. Local elementary principals are supportive of pen pal groups and teachers are beginning to talk to each other regarding "one-time special events."

The Star Schools Project has helped support numerous informational sessions and educational uses of the ICN. Many more teachers, administrators, students, and parents have had an opportunity to learn about the potential of distance education technology and participate in events involving multiple sites.

Star Schools Year Two has allowed us to provide curriculum information to a large number of educators. We have provided fifty-two Early Childhood educators an opportunity to be introduced to the new Primary Program over the ICN, eighty elementary educators received staff development on reading strategies for struggling readers with follow-up to be scheduled over the ICN, and forty-five 9-12 grade educators in our fifteen high schools completed interdisciplinary studies and brought their students together in five ICN sites to share the results. The impact this year has been positive and has generated a great deal of enthusiasm to continue in the future.

Northwest Iowa Writers conference for grades 7-12 with three schools participating. Sharing of elementary science classes between two schools. Use of the ICN by the Rural Action Council. Sociology and Statistics college classes delivered to remote sites. State and regional meetings.

(a) Continue to increase the teacher base for interactive television distance education teachers.
(b) Introduced the distance learning possibilities to 21 area schools.
(c) Continued collaboration between the AEA and the community college in the distance learning area.

(1) Introduced over 800 K-3 children to the network and showed teachers that the ICN is a viable educational tool for them. Program was the Storyteller series.
(2) Series of alternative high school classes demonstrated that the ICN is a viable educational tool for alternative students.
(3) Series of middle school science classes demonstrated effectiveness of the ICN in utilizing the Chatauqua science teaching reform, e.g. investigating a problem, testing answers, explaining results of research and testing, asking and answering questions and sharing information.

(4) Mock trial and debate scrimmages demonstrated the adaptability and versatility of the medium, as did a series of K-2 creative dramatic classes. The classroom may look physically inflexible, but it is not.
(5) Russian program demonstrated that a year-long foreign language program, and therefore many other disciplines, can be successfully taught on a regular and exclusive basis on the ICN.

(1) We have had at least four separate learning experiences in the K-12 levels demonstrating the ICN capabilities. One was a math lesson to two sites originating from the community college. Two were social studies lessons. One class spoke to Ed Augustine in Des Moines about international trade issues. The other class studied issues of crime in conjunction with two other schools. The fourth event was a junior high class and an ISU teacher education class which met together twice this spring to study how junior high students learn to read.
(2) One school is originating a three week non-credit French class for students entering high school. It goes out to two other schools as well as including four origination site students.
(3) Plans are underway for one school to offer French I to two, and possibly three schools for the upcoming school year. Also in the works are plans for Spanish II to go out from one school to another school. There is the possibility of Spanish I being offered to students in two schools. So we have moved past the stage of offering "events" and now are discussing and planning year long academic classes.

This is the first year we have had elementary school students on the system and they love it. Activities with elementary students included meetings with computer pen pals, an astronomy lesson with a University of Iowa professor, and a speech and book exchange.

Gives schools with few students for a class the opportunity to offer that class. Example: Russian II, three schools had only one student each but those students were able to take the course. Gives students an opportunity to be successful by offering a different approach to teaching a class. Example: Tech Math is a hands-on, applied algebra class that many schools do not offer in their regular curriculum. Provides a different learning environment that is stimulating and challenging. Helps high schools meet state requirements.

(1) Many more people aware of the positive aspects of the ICN. Our AEA and many schools want to be connected NOW! Teachers are asking how they can learn about the system. People are beginning to think of the ICN as a way of saving valuable time by using the system for meetings.
(2) Though a bit limited yet for K-12 education, educators are beginning to try teaching or having students learn using the ICN. There have been some exchanges and interactions between or at most of the regional sites, including one or two short courses such as combined technology classes involving three schools. One school was in contact with university personnel during a recent curriculum study, and an ASCD staff development program was captured off satellite and fed to ten ICN locations.
(3) Interestingly, elementary teachers have taken the most initiative to plan and execute short term collaborative activities.

Positive impact in all the grant's intended areas: teachers, administrators, students, citizenry. After two years we have 80 K-12 educators with formal distance training, several hundred more with exposure to ICN and distance education theories. Several dozen meetings, workshops, and seminars have been held. Ten enrichment activities for teachers and students have been directly funded and the first term-long class has been held. Public awareness of the ICN (and mostly favorable opinion) has made a quantum leap upward.

The most evident is the gradual process of teachers and administrators taking over the responsibilities of requesting, developing, and scheduling their own fiber optic coursework. This is absolutely necessary (the ownership) for the success of the network. Although much work has been done to publicize the network, a lot of teachers have been rather reluctant to take on the extra effort to put some programs together. A few pioneers have experimented and a lot more are now sold on the merits of the system. People (teachers) now see it is there to stay and can benefit students.

(1) Series of science programs with Dr. James Van Allen from the University of Iowa and the Science Center of Des Moines. (2) Has really brought our community college and the local AEA together as a cooperative unit, knowledge and assistance has been shared very well. (3) Teachers and administrators have become much more aware of the ICN and distance education. They are more active on the system

The Star Schools Grant has developed positive attitudes in students who have taken a course or attended an event over the ICN. Their openness toward this type of technology made an impact on how their parents, friends, and school teachers and administrators feel about the ICN. It also allowed us the momentum to use/offer more classes and events.

As the system becomes operational at the start of the school semester, full semester courses are offered over the system with practicing teachers needing hands-on assistance with difficulties and techniques that will enhance and make their presentations effective in a distance education environment. This also leads to a creative and imaginative program delivery in which the Star Schools expertise was very valuable. Internet access was an excellent extension on Star Schools, especially in the non-POP schools.

What concerns do you have that you believe need to be focused on during the remainder of the Project?

I don't know if the project can do anything about this, but the K-12 districts need to open their classrooms more readily to the public. Most still want absolute ownership of them and I don't think they fully realize the positive image that the ICN can give their district. I think we need to slow down a lot and do an excellent job of what we do. Most of us feel overwhelmed most of the time. It takes much more time for ideas, meetings, class preparation, etc. to take place in the K-12 districts than it does at the community college or the state level. That's not a criticism of them, there are just more layers of administrators for them to go through and money and time are a bigger consideration there than in other places. When I have heard criticism of the ICN, it has been from principals complaining that this is taking up more of their time than they thought it would. We would hope that as we make agreements between districts regarding classes and all the details they involve, we would establish some guidelines so that each semester is not starting over. We need to make a concerted effort to bring K-12 teachers on the system. We are showing them how to use the network and to write curriculum for distance education, but they are not being given the time to teach on the system by their districts.

Some of the objectives are not fully achievable because of local situations. Most of the principals and teachers we have approached are not interested in a student communications club (time, staffing, cost concerns). Support for a student peer tutoring project has been slow to develop. A few teachers are good "peer mentors" and willingly help others get involved in the ICN. Other teachers want additional compensation for any extra work outside of the classroom.

The foremost concern at this time is that we need to be assured we are giving our people the most up to date information. We still feel isolated from the hub of decision-making and technology information. For example, we do not have enough technicians and technology experts to provide us with comprehensive knowledge to succeed in using Internet and other distance learning tools. Can we receive resource information to help us in this matter? Additionally, AEA consultants using the ICN rooms need access to technical assistance more readily available than at the present time. Can we support this assistance through Star Schools? Can we get a phone line installed for Internet usage?

Advance publicity by originators so that receive sites will know about upcoming events.

(a) Continue working with area POP sites to take advantage of the interactive television component of the ICN.
(b) Increase ICN knowledge level in the region.

Continue to develop more demonstration programming to help lead the way for school districts. The classrooms need their second year equipment! Especially the phone connection needs to be operable between sites and the ICN. Scheduling software problems need a final resolution. We need more time to be creative. The above will help give us that time.

I would like to continue to prove the premise of the ICN in the K-12 levels. I would like to continue to see academic subjects being offered to the students who do not have them in their schools. Scheduling seems to be less of a problem with the two classes we have. Also financing seems to be less of a barrier as we see other areas surmount these problems and follow their examples. I feel our AEA did an outstanding job of utilizing the ICN. They had a permanent reservation from 3:30 - 5:30 every Wednesday night. That spot was utilized for all sorts of teacher inservice. New products were demonstrated. The Internet was taught and demonstrated during many sessions. The Vocational Preparation and Literacy Coordinators of the AEA used that time slot for area-wide meetings of their teachers. A great beginning was started last spring. The AEA plans to use the ICN in the same way all this next year.

It is difficult to reach the K-12 audience during the summer months. We will "dig our heels in" again during late August and September to interest more teachers in seeing and utilizing the ICN. Many teachers feel they must offer a semester long credit course. We need to highlight using the ICN for limited events as an introductory alternative.

If we are not re-funded, the group can spend September concentrating on how all the good things that are now happening will be able to continue. I am afraid if there are no coordinators, no one else will pick up the ball and keep things continuing, let alone growing. Another concern is the purchase of equipment from Year Two of the grant. The year is almost up and we have not gotten our equipment.

(1) Developing (or work with teachers) instructional "modules" for actual use on the system to help further promote the system. These "modules" can be anything from a short demonstration to a longer sequence.
(2) Getting the Clearinghouse better established and publicized. Currently very few people even know about it, let alone use it.
(3) Maintaining a user network of teachers who have training and/or experience on the system to collaborate between themselves and mentor their colleagues in the future.
(4) Get telephones! More publicity with K-12 schools. More involvement from K-12 instructors. Better notification of system failures/delays.

(1) Increasing access for educators, (2) open discussion of critical financial issues: school budgets, teacher pay, ICN operation costs, (3) electronic access to a statewide database, (4) better concordance of Regent university training presentations with K-12 teacher expectations, (5) candid discussion of relative merits of various activities (e.g. term-long courses versus special projects), (6) how do we maintain momentum (not to mention logistics of ICN operation) if Years 3 and 4 are not funded?

(1) Scheduling problems. There must be some move to standardize bell [class schedules] and day [school calendars] times.
(2) The process of getting more schools and teachers involved in fiber optic distance education that do not have a site via Internet and short travel.
(3) Ability to schedule times on the network for K-12 schools. Lots of time is taken by university and community college coursework.

SCHEDULING! Additional classrooms (Part III). Funding for training and additional equipment for classrooms.

Scheduling at the K-12 level. Not only do we need to look at the ICN scheduling policies and procedures, but also at stop and start times, etc. We need a statewide agreement on class times for schools. Specific teacher issues such as pay, extra preparation time, special certification, and material distribution.

How do we continue the forward motion created if the grant is not renewed? How do we continue to provide services such as Internet and teacher assistance on the ICN without Star Schools funding?

Describe the progress of your region in meeting the goals and objectives outlined in your Year Two regional plan.

As I completed this report, I felt as if I hadn't accomplished anything this year, but I know that isn't true. Everything has taken more time than we would have liked. Agreements between schools, all the details on texts, moving materials, who wanted classes and what they wanted, trying to include all the districts in the area when you know that only the ones with classrooms would probably really have students in the classes, all of these have consumed hours. Some of the details don't mean much to you or me, but they are important to the K-12s. To date, we have concentrated on just getting classes started and doing a good job in them. At this time, we have all the top students in these classes which does not meet several of the objectives. I would like to see more special population students in classes. I don't know if this will be a reality in another year or not. In fulfilling our goals and objectives, we have spoken to numerous groups throughout northeast Iowa, giving them live demonstrations of the ICN network, and we have met and provided each school district with several opportunities for their faculty to receive information and inservice on the ICN. We have offered two area-wide demonstrations and information meetings on the network. We have made a concerted effort to reach all age levels with our information and demonstrations. I have yet to have students use the network independently or form a telecommunications club. I think they are interested in using the network for speech practice and perhaps for debate practice. I think inter conference Student Council meetings would be interesting.

The community college, the AEA, and the local schools have been working cooperatively to fulfill the objectives of the project. These have included needs assessment meetings, focus groups, ICN curriculum planning meetings with school administrators, identifying teachers to attend curriculum institutes, and facilitating local activities related to the curriculum institutes. There have been numerous information meetings and ICN demonstrations to students, teachers, administrators, parents, civic, and community groups.

Our Year Two plan focused on an increase in the number of participants with the ICN and the introduction of the newest trends and issues in education. We have made considerable progress in both areas. Specifically, we tied our fifteen high schools together this year with distance learning being a priority component. This forced our educators to participate in the Star Schools activities and pushed us way ahead in usage with educators and students. We have not moved far with parent groups, although invitations have been extended beyond the K-12 community. We need to work harder to find ways to include parents.

Participation of 40 new teachers in training and workshops. College courses on the network. Addition of an AEA ICN classroom. Regional and state meetings held.

(a) The curriculum institutes were held for math and science.
(b) Teachers were identified for all the learning opportunities.
(c) Continued working with the community college.
(d) Nearly 300 teachers were exposed to the Internet with much time spent with 20-25 of them.

(1) Continued and funded local coordinator position to work in local school district to carry out objectives of the project.
(2) Organized display programs for a county fair, a Corn Carnival, and Happy Days in another town for the summer.
(3) Planned district wide inservice for educators with AEA on ICN/distance education. It had to be canceled due to a blizzard.
(4) The activities held as classes, demos, inservices were used as opportunities to familiarize most teachers in the Area with using the ICN and its potential for distance education.
(5) Continued dissemination of print material to publicize and inform about ICN/fiber optic technology/Star Schools grant.
(6) Supplied traveling display, banner, and handout materials for presentations, displays, and demonstrations by local coordinators.
(7) Over 2500 students and teachers in the Area participated in some kind of programming. Most of them were given ICN/Star Schools literature to take home; 2500 ICN activity books were distributed in schools to all K-3 students.
(8) Teacher peer groups, faculty exchanges, discipline associations, and superintendents have used the network for meeting and exchanging information.
(9) Quick reference manual and comprehensive handbook for using the network was developed for educational and non-educational users of the network in the Area.
(10) Recruited and support provided for teachers to attend three Internet workshops, also an all-day hands-on Internet training at University of Iowa. Recruited and support provided for nine teachers to attend curriculum institutes.
(11) Have assisted five school districts in working out cooperative agreements for classes.

Activities carried out in Year Two included presentations at various civic groups in the Area. Three separate workshops were conducted during the beginning of Year Two. We trained a total of 35 teachers and 20 AEA staff during that time. On March 24, we had an area-wide demonstration of the ICN. All five fiber-optic rooms were opened to the public. Area-wide advertising in the local newspapers and radio stations notified the public of this event. We had a panel representing the following areas: Chamber of Commerce, community improvement groups, Extension, hospitals, and the police force. The panel presented how their groups could and have used the system. Areas left to be worked upon are reaching minority students. We have a large African-American population in our area. Programming could reach them either through the local classroom, or using the local schools cable system which can receive ICN programming. We have not had students themselves using the system for their group meetings, etc. This area has not yet used advertising in school registration materials. An effort to put a poster in the schools was met with resistance early last year so there is room for improvement.

The Star Schools Regional Partnership has progressed smoothly towards meeting its goals and objectives for Year Two of the grant. We are also publishing a bi-monthly Star Schools Newsletter.
Timeline: (1) 10/93-9-94 - Advisory Committee meetings, (2) 1/94-2/94 - Conduct assessment to determine user needs for teaching over the ICN, (3) 10/93-9/94 - conduct information sessions

regarding the ICN to citizens, community groups, teacher inservice, town meetings, educators, and PTA groups; provide demonstrations of the system and provide staff development for potential users including workshops and presentations, (4) 10/93-9/94 - work closely with project management and the TEA, (5) 10/93-9/94 - provide support to teachers and school districts involved in teaching students at a distance including release time and technical support, (6) 10/93-9/94 - assist in coordinating access to statewide and national networks; attract traditionally underserved groups to math, science, foreign languages, literacy, and vocational education through courses offered on the system; provide staff to assist in functional implementation and maintenance of classrooms; assist in the evaluation of teaching and use of the technology.

2.1, 2.2, 2.3 *Inform citizens, students, educators and parents about the effectiveness of distance education and the purpose of the project.* Wrote articles for the community college newsletter and worked with the Community College on articles for local papers. Information on EDUTRAC sessions was also published in the community college newsletter. Helped establish and initiate the Area Regional Telecommunications Council - one of the most active and involved groups in the state. Met with AEA groups and school districts about Star Schools and the ICN, gave them information, and demonstrated the system when possible. Helped design and deliver EDUTRAC series. The number of sessions grew as did attendance at sessions and the audiences served. Requested tape footage of teaching on the system for use with demonstrations and meetings with school districts. Helped develop materials for use with Area school persons about what Star Schools has done in the Area.
2.4 *Provide access to the ICN.* This proved to be somewhat of a problem because the system is heavily scheduled in the Area. We did find time for everyone who was willing to be a little flexible.
2.5 *Provide support to teachers and districts involved in distance education.* Facilitated the establishment of a schedule for 94-95 classes and staff development as well as working with districts to get students updated information on courses offered and registration materials and to get teachers information on staff development opportunities. On going year long assistance to teachers on program planning and coordination. The preparation of budgets and ordering of materials. Conducted program and system evaluations.
Other. Assisted in the scheduling and coordination of teacher in-service activities, curriculum initiatives and program evaluation. Coordinated people from the Area to attend state-wide inservice and curriculum events and helped in designing such activities.

Objective 2.1: Two meetings of the Regional Advisory Committee were held. One meeting of the users' group was held over the network, others are in planning. Numerous personal presentations by the three coordinators have been carried out, some over the network, others at organization and other group meetings. Two editions of a newsletter have been distributed (circulation about 1750). Informational brochures, book covers, and folders prepared by Management were distributed to all buildings in the region (313). No press releases were issued from the regional partnership.
Objective 2.2: Most sites hosted "open houses," but despite timely and wide promotion, most were poorly attended. Several presentations were made to groups of educators; foreign language teachers, social science teachers, AEA board secretaries, and district wide inservice (demonstration booth).
Objective 2.4: A software program was developed to assist regional scheduling and information was made available to appropriate school groups. Star Schools money was used to assist connection time for several teacher meetings. All Star Schools teachers and their superintendents were encouraged to develop plans for using the ICN for interaction between themselves and for demonstration projects with students, using funds set aside to enable release time and ICN contact time. On the whole, there was very little take up, with a few notable exceptions, such as the efforts of several elementary groups, and one or two short-term high school technology projects.

Objective 3.4: About $2000 was spent from budgeted funds to support local schools to allow teacher release time for training and system usage. The majority of the coordinator's activities revolve around recruiting and supporting teachers to participate in TEA staff development activities. Access to the Internet via the ISU/Clearinghouse initiative has proved very popular in the Area. Regional funds, as well as a special allocation from Management, have facilitated several training activities and the purchase of related materials. Two attempts to hold one-day workshops for administrators have resulted in poor enrollment and cancellation.

Very satisfied with overall progress toward objectives. Internal changes in school activities/policies are slower than hoped. Reasons include: (1) resistance to any change, (2) political turmoil, (3) unresolved financial issues, (4) limited access to ICN facilities.

(1) Sharp increase in use. All of the positive, glitch free encounters have opened the door for the less adventuresome.
(2) Site activities being planned and carried out without our help and support.
(3) More special groups and underserved populations have started the planning process to include themselves in upcoming events.
(4) Creativity has come alive and we see a number of projects evolving (i.e. accelerated math program for 6th grade this summer).

(1) Our main goal was to provide training and support for area teachers. To date we have over 100 teachers trained and 40 administrators trained on the uses and technology of the ICN. There is at least one teacher or administrator from each district who is knowledgeable about the ICN. (2) We have established a successful partnership with our AEA which has enhanced our capability of providing support and assistance to teachers using the ICN.

The Area has done a good job of meeting and/or exceeding the goals which we set for ourselves. We feel as though the Area is well educated in the area of distance education and has come a long way in a very short period of time. We have offered two full semester classes and given over 1250 talented and gifted students the opportunity to use the system. We have offered a number of opportunities to use the system. We have also offered a number of demonstrations, special events, and other activities to help insure that we have met our pre-set goals and objectives.

Our region has been plugging away with creative solutions in order to meet many of the goals and objectives of the Year Two grant. The biggest hurdle is the disadvantage of having only one POP as a K-12 site. This develops a whole list of issues in order to get the other K-12 schools to use the other available sites.

Describe three or more of the most significant events that have occurred in your region using the ICN between January 1 and June 1, 1994.

(1) The community college used the ICN to connect with two area high schools and presented one-hour sessions on the community college to all of the seniors. Students were also given the opportunity to talk with representatives from the financial aid office, the learning center, the counseling center, and a current community college student.
(2) An area-wide open house was held with six one-hour sessions presented to all eight regional ICN sites. Each presentation included a brief history of the ICN, an explanation of the community college's role in the ICN, some teaching techniques and demonstrations of equipment (for the first twenty minutes), and forty minutes of time for participants to practice using the system. Teachers who had attended the Star Schools training sessions served as hosts/hostesses.

(3) High school students in five sites participated in a health occupations class taught by a community college instructor.
(4) High school students in a government class had the opportunity to listen to U.S. Education Secretary Richard Riley deliver a speech over the fiber optics system.
(5) One school district will offer ten ICN classes for the 1994-95 school year including Japanese and advanced placement English.

(1) One schools' government class students traveled to an ICN classroom and interviewed the candidates for governor over the ICN. An earlier interview by another schools' students was the first time that Congressman Grandy had seen or used the ICN.
(2) Spanish classes in two schools have gotten together over the ICN to practice conversational Spanish.
(3) Wes Birdsal, a retired engineer from the power and light company gave an electricity and energy conservation lesson to science students at several sites throughout the state of Iowa.
(4) Sixth grade science students from two schools have met twice to share science activities and to present demonstrations to the other class. Neither school system has an ICN classroom. Both classes were bussed to a site.
(5) The AEA has been doing several staff development workshops, including computer software demonstrations, to teachers at seven sites.

The primary program inservices: 52 educators working over the ICN in four sites for three sessions with our Early Childhood Specialists, receiving a copy of the document, and forming a network with the Area. This involved a significant number of teachers with a direct impact on classroom practice.
Galaxy Grant Plan: 15 high schools representing all of the districts participated in an innovative plan to coordinate three grants, including Star Schools, to support an interdisciplinary, community-based study with distance learning being a major component. Students and teachers used the ICN as a sharing device. We hope to use it as a resource for information when we are equipped to use the Internet.
School Activities: Russian class; writing seminar with students sharing writing with students in another AEA; students interviewing George Washington. The enthusiasm exists, but the classrooms are a great distance for many of the schools and transporting children becomes a critical barrier to school usage.

(1) Northwest Iowa Writers conference for grades 7-12 with three schools participating.
(2) Sharing of elementary science classes between two schools.
(3) Use of the ICN by the Rural Action Council.
(4) Sociology and Statistics college classes delivered to remote sites.
(5) State and regional meetings.

(1) Internet training and subsequent teacher use of Internet.
(2) Student use of Internet.
(3) Several teachers/instructional projects where interactive distance learning was used.

(1) Russian Language 1,2,3 and 4 for high school students of two schools, an intra-regional class.
(2) Storyteller Series - hired a storyteller, gave activity books and storytelling demonstrations by invitation to over 800 K-3 children in the Area. They traveled by bus to the closest site, heard one or two stories, introduced themselves, could ask questions of each other and the storyteller. Discovery - there's a world out there!
(3) Alternative High School - series of classes for alternative high school students who don't function in a regular high school. Classes were on sex, parenting, handling stress, how to fill out a job application, drug and alcohol abuse. These kids were made to feel special by exposure to a sophisticated educational tool.

(4) Sixth Grade Science - inter-region and intra-region. Kids shared science experiments. One class performed a genetic survey on the remote classroom, charted differences and similarities - educational and fun. They too could visit at the end of class and get to know each other.

(1) The first most significant event was the town meeting. A lot of organization went into it. A follow-up article in the newspaper was published. Eight community leader panelists participated in a two-hour discussion of the ICN sponsored by the community college. Panelists included members from the Chamber of Commerce, the hospital, the police department, Extension, and community improvement groups. Also on the agenda were Dr. Bob Hardman, Director of the UNI Center for Educational Technology, Phil Dunshee, Deputy Director of Iowa Economic Development, State Representative Bob Brunkhorst, State Senator John Jensen, Dr. Dan Brobst, Vice President of Academic Affairs for a community college, and Roger Rezabek, Director of Academic Telecommunications at a community college.
(2) Second was one teacher's excellent use of the system for his joint effort with another teacher in another school. The classes met together twice on the ICN. The first time the students interviewed a police officer as well as a judge. The subject was crime and what to do about it. The two classes studied the issues separately and met together again to share their results. The student to student interaction was wonderful. They compared crime in two towns with interesting results.
(3) The third event was a seventh grade class and a class of ISU teacher education students. These two classes met together twice on the system. The first time they were introduced to each other and partnered up for the semester. During the semester the partners (a junior high student and an ISU teacher education student) wrote to each other on e-mail discussion literature, reading interests, etc. Late in the semester, the classes saw each other again on the system and were able to talk to each other again. The overall focus was to teach the ISU students how to teach junior high students subjects of literacy. It also gave the seventh grade students a chance to talk to college students about their reading interests or college life in general. The seventh graders were a lot less inhibited the second time over the first time when on the ICN.

April 11, 1994 - Elementary School children at three sites connected with their computer pen pals.
May 11, 1994 - Elementary School children connected with school children in another school to discuss astronomy questions with a University of Iowa professor.
May 25, 1994 - Elementary School children connected with elementary children in another school to discuss books they had read and give oral book reports.

On ICN: (1) Faculty demonstrations for schools interested in the system.
(2) Held some meetings on the system for teachers, administrators, and other school groups.
(3) Staff development classes were schedule by AEA and offered over the ICN each Monday night.
On IFTS: (1) Full day of classes including four college credit courses and five high school credit courses offered to Area schools.
(2) EDUTRAC sessions were offered every Wednesday afternoon. These are planned by a committee of people representing area schools so they meet needs expressed at the local level and continue the idea of "local control."
(3) Career speakers were offered every Friday to high school students. This is a part of our careers course but the speakers are available to all students and we have a large contingency of students who take part in this opportunity.

(1) Used the ICN to distribute the ASCD satellite program (Performance Based Assessment) to teachers in ten different locations with over 100 in attendance.
(2) Interest in having access to the Internet has been very strong. Using regional and budget funds, a comprehensive awareness and training program has been put in place by the AEA.

Regional funds will be used to provide accounts to any Star Schools teacher who wishes to have one.
(3) Seventh grade Life Science students in one school listened to a professor from the community college and then did an interactive lab on genetics with students from another region.
(4) Second grade students at one school listened to second grade TAG students from another school present their enrichment projects.

February 18, March 3,8, & 10, 1994 - Mars Base Construction and Follow-up
Over 150 students from three schools heard a presentation from a Lockheed engineer from the Johnson Spaceflight Center in Houston, Texas on the first date. The classes then built their own model Mars bases and shared them over the network on subsequent dates.
February 21, 1994 (Morning and afternoon sessions) - Author Visit
Children's author shared with elementary children at all sites in the Area.
February 22, 1994 - Seventh Grade Sharing
Seventh grade students from two private schools. Each school showed special projects they had worked on such as a quilt they had made and various drawings. They also were able to recite speeches and sang together.
February 23, March 2 & 10, 1994 - Designer Prep
Math, science and technology teachers heard other teachers and professionals speak on using math and scientific techniques for problem solving. Also hands-on activities.
March 1, 1994 - Pen Pals
Elementary students from two schools became pen pals.
March 1, 1994 - Problem Solving: Past, Present and Future
K-12 problem solving. Teachers and students from five schools. Understand the history and process of problem solving and practice problem solving.
March 3, 1994 - Graphing Calculator Follow-up
Superintendents, principals and mathematics, chemistry, and physics teachers participated in a follow-up graphing calculator inservice.
March 7, 1994 - Getting a Job in the Real World of Work
High school vocational students heard from Human Resources personnel from Great West Casualty Company and Heartland Quality Foods regarding entry level skills, professional conduct, and success in the work place.
March 9, 1994 - Benchmarks
Superintendents, principals, and teachers interacted with Field Services Coordinator regarding science curriculum writing.

(1) AP World Civilization Class. Entire course successfully conducted over the network.
(2) English forum. Monthly English teacher meetings for professional development ready for its second year.
(3) Region wide technology survey (AEA) which brought in a live-two-way culmination to paper and pencil survey on districts' technology plans and needs.
(4) Summer accelerated math program for 6th grade meets daily for one week on the ICN at three locations.
(5) Regional math bee held as a trial replacement for the standard math bee.

(1) Several schools have brought pen-pals together to see and talk to each other for the first time. One particular group was a class of third graders who after becoming comfortable with the ICN began to run the touch screen like pros.
(2) We've also had a series of three sessions in which 6th and 8th graders have discussed manned and unmanned space flight with Dr. James van Allen from the University of Iowa and Dan Miller from the Science Center Challenger Learning Center. The first two sessions allowed the students to get both sides of the issue. They then came back prepared with position papers to discuss with Dr. Van Allen and Dan Miller in one final session.

(1) The Area sponsored a TAG program in conjunction with a TAG facilitator. This program reached over 150 students in five counties in the Area. More than 150 talented and gifted students from five local school districts experimented with the Iowa Communications Network in May. This project allowed two Talented and Gifted classes a day the opportunity to use the ICN classroom. Each student gave a brief presentation to students in two other sites. This experience gave these first through sixth grade students the opportunity to see the future of education in Iowa. Planning has begun for next year, and we hope to hold more events like this as well as open houses for parents.

(2) Cooperative sharing project with a high school and Community College. Over the past six months, a community college Laser/Electro-Optics Technology instructor and eight vocational students at a high school have been using the ICN to communicate, The high school vocational instructor helped coordinate these special meetings to enrich his students' understanding of specific topics they were studying. The Star Schools grant assisted by paying for the ICN time. The students discussed various subject matter with community college instructors. All of these meetings were successful and showed what an effective tool the ICN can be. For their last meeting of the year, participating students met at the community college campus and were able to talk to the college instructors in person. They also toured the Laser/Electro-Optics Lab. This project has been a big success due to the cooperation between the community college, Star Schools, and the high school. We hope to continue this project next year as well as increase the number of participating schools.

(3) We had two full-semester classes during the spring semester. One was statistics and probability and the other was advanced placement English. These were strictly K-12 courses and were shared between five schools.

(1) Having our Regional Partners meetings and Regional Telecommunications Council meetings over the ICN was very effective and time saving.

(2) "Teens in Crime" Town Meeting was held between Drake Law School and area Juniors and Seniors who take a position on locker searches, drug penalties, etc. that affect today's youth. Approximately 60 area students participated.

(3) "Sixth Grade Science Sharing" gave two groups of elementary students and Middle School students a chance to share their posters and projects over the ICN. Approximately 30 students at each of the two sites participated.

APPENDIX D

Needs Assessment

Purpose of the Regional Needs Assessment

The purpose of the regional needs assessment is to determine instructional, staff development and administrative needs at the K-12 level that can be met via the ICN. Results of the regional needs assessment will be used to determine statewide needs and priorities.

Use of focus groups to gather information provides an opportunity for both individual and group needs to be expressed. Interaction among group members may also provide opportunities for important issues to surface that may be overlooked on an individual basis.

The focus group leader should explain the purpose of the needs assessment to group members. In discussing the purpose, it should be noted that:

Instructional needs may be:
- Complete courses
- Specialized units/modules
- On-line research and database uses
- Curricular enrichment lessons
- Other

Inservice/Staff Development needs may be:
- Complete courses
- Specialized workshops
- On-line/computer uses
- Other

Administrative needs may be:
- Data access/reporting
- Meetings/workshops
- Other

Groups to Involve

Representatives of the following groups should be invited to participate in local focus group sessions. It is our intent that participants be included from schools with and without current connections to the ICN. Participant selection is to be determined by the Star Schools regional coordinator.

Participants to be included

Teachers
Principals
Superintendents
Library Media Specialists
AEA Representatives
Community College Representatives

Optional Participants

Community Leaders
Parents
Students
School Counselors
School Board Members
Others

Timelines

Focus groups should be scheduled in January or February, 1994. The deadline for submitting regional results to the evaluation team is March 1, 1994.

The time required for conducting the focus group should be approximately 2-3 hours. The three hour time frame includes small group consensus (local/county level), as well as larger group consensus (regional level).

Each region will provide the results of their regional focus groups (the lists of needs identified) with the top three regional priorities identified for each of the five questions.

Identifying Focus Group Leaders

At least one focus group leader will be needed at each site. The number of focus group leaders will vary among regions depending on how many focus groups are scheduled. For example, if five focus groups are being held simultaneously at five POP sites, at least five leaders will be needed, one at each site.

It is strongly recommended that AEA personnel be involved in planning the local focus groups and in leading focus group sessions. The focus group leader will be responsible for asking the questions, leading the discussion, assuring that responses are accurately recorded, and building consensus. Focus group leaders may be drawn from other groups, such as teachers who have attended distance education workshops and institutes. The selection of focus group leaders is left to the discretion of the Star Schools Regional Coordinators. It is recommended that individuals who have experience related to distance education and some knowledge of the ICN and the Star Schools Project lead the focus groups.

Prior to the focus group meetings, the regional coordinator may want to meet with the focus group leaders to provide an overview of the ICN and the Star Schools program, the purpose of the needs assessment, and the procedures to be used. It should be explained that the role of the focus group leader is to facilitate discussion and generation of ideas during the focus group. Focus group leaders should also be provided with the sheet labeled ***Tips for Focus Group Leaders***.

Tips for Focus Group Leaders

What is consensus?

Definition: A group consensus is formed when all members of a group are willing to accept an idea as the best choice for the entire group.

Identified by:
- I believe you understand my point of view.
- I believe I understand your point of view.
- Whether or not I prefer this idea, I will support it because it was reached openly and fairly.

Consensus is achieved when there is no longer opposition.

Guidelines

1. Ideas are presented as logically as possible, followed by listening to responses. Other points of view should be considered.

2. When discussion reaches a stalemate it is not to be perceived as a win-lose situation. The group should look for the next most acceptable alternative that all members can accept.

3. Participants must feel free to express questions and concerns before an idea is accepted. Conflict should not be avoided to maintain harmony.

4. Majority vote, negotiation, coin flipping, etc. must be avoided. These methods create a win/lose environment and undermine the "for the good of the team" atmosphere.

5. Differences of opinion are natural and vital to the process. The more diverse the opinions exchanged are, the greater chance for a better, more creative ideas.

Advantages of Using Consensus

- More support for decisions.
- More information is obtained and better decisions are made by groups than individuals.
- Groups are more unified through consensus.
- Groups learn to explore disagreements and alternatives rather than avoid them.

Materials Needed for Each Focus Group

Large sheets of paper/newsprint to tape on the wall
Masking tape for posting the newsprint
Felt tipped markers
Blank notecards/paper for each participant
Pencils/pens for each participant
Flip chart
One copy of the questions for each participant

Each group will use large sheets of paper/newsprint to record the results of round robin or brainstorming sessions in response to five questions. Participants will use notecards or paper to rank their top three choices for each question.

Setting up the Focus Groups

The Star Schools regional coordinators will determine how the focus groups are set up in their region. Some scenarios are described below. These are only examples. The process for conducting the focus groups can be found on the following page.

- **Example 1**
  The regional coordinator conducts a series of two hour focus groups, one in each county. Each county prioritizes their needs. The regional coordinator then determines the top priorities at the regional level based on the county results.
- **Example 2**
  County focus groups are conducted simultaneously at each of the POP sites in a region. For the first two hours, the county sites meet off-line and come to county consensus. A third hour is conducted over the ICN with the county sites presenting their priorities and coming to regional consensus.
- **Example 3**
  ICN meetings are scheduled at half of the regional POP sites at one time, and the other half at another time. Half of the POP sites discuss and prioritize their needs individually during the first two hours and then discuss over the ICN and come to larger group consensus during the third hour. This process is completed again for the other POP sites. The regional coordinator and group leaders may then discuss the results and reach agreement on the top priorities for the entire region.
- **Example 4**
  One large meeting is held at a central location in the region (i.e. the community college or AEA) with representatives from all counties in the region. Subgroups discuss the five questions and prioritize needs during the first two hours. The subgroups report to the larger group and regional consensus is determined following discussion.

These are examples of strategies for completing the regional needs assessment. You may have other strategies you would prefer to use.

Process for Conducting Focus Groups

I. **Explain (5 minutes)**

The group leader explains the purpose of the needs assessment (see the sheet labeled ***Purpose of the Regional Needs Assessment)*** making sure to include the examples listed for the three areas where needs are to be determined: Instruction, Inservice/Staff Development, and Administration. Following the explanation, assign a group recorder. The recorder will be responsible for listing items during step III.

II. **Silent Generation of Ideas**

Procedure: The group leader distributes one copy of the questions (labeled ***Questions for Participants***) to each participant. The group leader then reads each question (using the ***Focus Group Questions for Group Leaders***) including the brief explanations beneath each question. Each participant is asked to write as many needs for each question as possible within the time limit of ten minutes.

Rationale: It is important that participants be allowed to think and to record their ideas without interacting with others to decrease inhibitions and reduce initial group conformity and persuasion.

III. **Round-Robin Listing (5 minutes per question, 25 minutes total)**

Procedure: Each group member, in turn, presents one of this/her responses to question #1. Each response is listed verbatim by the group recorder on newsprint/paper that has been taped to the wall. Items should not be discussed at this stage. Continue the round robin until all responses for question #1 has been recorded. Repeat this process for the remaining questions.

Rationale: Round robin listing insures that all participants have an opportunity to influence the group's decision and include minority and conflicting ideas. It also reduces the chance that any individual(s) can dominate or hinder the group's interaction and functioning.

IV. Discussion (10 minutes per question, 50 minutes total)

The group leader facilitates discussion of the ideas recorded under each question so that participants can clarify and/or elaborate on their ideas. Complete question #1 before beginning the discussion of question #2.

V. Rank and Tally (15 minutes)

Distribute a notecard to each participant. Ask the participants to individually list the three most important items for each question and write their choices on the notecard. Allow five minutes for this activity. Each participant is then asked to state their top three items for each question. These are to be recorded on the wall chart using a tally mark beside each item. After everyone has responded, circle the three items with the most tallies. Allow ten minutes to tally and circle the top three for each of the five questions.

VI. Group Consensus (10 minutes)

After the top three needs for each question have been determined, the focus group leader will use the following technique for deriving consensus for each question.

Announce: Based on the process we have conducted, these three items appear to reflect the most important needs we perceive in the area of.... Whether or not these items were your personal choices as priorities, we want to know whether you can accept that these are the priorities identified for our county/region.

Ask: As I read each of the three items, if you can accept the item as a priority, indicate this by using a thumbs-up sign. If you have strong opposition to this item as a priority, please indicate this by using a thumbs-down sign. (No sign can be interpreted as support)

Follow-up: If there are no thumbs-down, you have reached consensus! Continue to the next question. If there are thumbs-down, the items receiving a thumbs down should be further discussed. Ask the person(s) giving the thumbs-down to present their viewpoint. If the person absolutely cannot accept the item, the group should look for the next most acceptable alternative that all participants can accept. (for example, try the item received the next most number of tallies)

PLEASE NOTE

Steps I - VI are to be conducted at the local/county/subgroup level. At the regional level, ask each local group to list their top three items for each question and then follow steps IV - VI.

Focus Group Questions
for
Group Leaders

The focus group leader should read each of the five questions below, including the brief explanations, to the focus group participants and respond to any requests for clarification.

1. **What instructional needs for students in kindergarten through twelfth grade could be met by using the ICN?**

   Instructional needs may include any resources or programs that would increase learning opportunities for students; any programs or courses needed to meet standards imposed at the building, district or state level; courses with low enrollments; courses such as English as a Second Language (ESL) or Advanced Placement (AP) classes; special education classes; etc.

2. **How could access to resources, experts, and information needed by K-12 students be enhanced through use of the ICN?**

   Access to resources, experts and information could include links to Internet or other on-line information networks; speakers or special guests on particular topic areas; connections to other groups of students such as rural and inner city students; etc.

3. **What critical staff development or inservice needs for K-12 teachers could be met through use of the ICN?**

   Staff development or inservice needs could include entire credit courses, workshops, peer networking, etc.

4. **What are needs of K-12 administrators that could be met through use of the ICN?**

   These could include access to data, data transfer, meetings, workshops, etc.

5. **What resources are available in your region that could be shared with K-12 schools in other regions?**

81

Questions for Participants

1. What instructional needs for students in kindergarten through twelfth grade could be met by using the ICN?

2. How could access to resources, experts, and information needed by K-12 students be enhanced through use of the ICN?

3. What critical staff development or inservice needs for K-12 teachers could be met through use of the ICN?

4. What are needs of K-12 administrators that could be met through use of the ICN?

5. What resources are available in your region that could be shared with K-12 schools in other regions?

Iowa Distance Education Alliance

K-12 Distance Education: A Needs Assessment

Research Institute for Studies in Education
Iowa State University

March 1994

IDEA State-wide Needs Assessment
March 23, 1994
Results

A state-wide needs assessment was conducted over the fiber optic system (ICN) on March 23, 1994. Thirteen of the fifteen regional partnerships were represented. During February and early March, regional needs assessments were conducted in all fifteen regions of the state with between 400 and 500 Iowans participating. Those participating in the regional level needs assessments included teachers, principals, superintendents, library media specialists, AEA representatives, community college representatives, community leaders, students, parents, school counselors, and school board members. The results of regional needs assessments formed the basis for discussion of state-wide priorities. The following summarizes the results of the state-wide needs assessment in the five targeted areas.

Instructional needs for K-12 students

Participants were asked to identify the most immediate state-wide instructional needs of K-12 students that could be addressed through use of the ICN. The top three priorities identified were:

1. Courses not available at the local school, particularly Advanced Placement, Talented and Gifted, Post-secondary enrollment, and Foreign Language courses.

2. Instructional units, events, or activities including guest speakers, experts, demonstrations, field trips, etc.

3. Student-to-student interactions such as sharing projects, conducting joint research, student networking, etc.

Other areas mentioned included database access, and using the system for skills classes, special education classes, exploratory classes, and specialized courses such as Black Culture.

K-12 needs for resources, experts, and information

Participants were asked to identify priority needs for resources, experts, and information at the state-wide level that could be met through use of the ICN. The top three priorities identified were:

1. Access to Internet and other electronic networks.

2. Access to special speakers, including experts, legislators, authors, Iowa historians, university personnel, career speakers, etc.

3. Access to a database or the clearinghouse with updated information on resources available in Iowa over the ICN.

3. Student-to-student interactions such as electronic pen pals, sharing creative works, science fairs, contests, student council meetings, etc.

3. Sharing of instructors across schools for courses not available at one of the schools or for team teaching of courses.

Other areas mentioned included career education and exploration, linking electronically to state libraries, visual demonstrations of experiments or activities in the areas of science and technology, and sharing of information about Iowa and its history from the regional perspective.

Staff development and inservice needs for K-12 teachers

Participants were asked to identify critical staff development or inservice needs for K-12 teachers that could be met through use of the ICN. The top three needs identified were:

1. Peer sharing and networking which would include meetings of teachers from the same curricular areas or departments to discuss and share.

2. State mandated and locally determined staff development opportunities.

3. Credit or continuing education courses and degree programs.

Other needs mentioned were inservice in the area of innovative or new teaching methods and technologies, sharing AEA offerings, using the ICN to involve teachers in district planning and problem solving, accessing experts and speakers, Internet training, an d inservices on specific topics such as Phase III, CNC instruction, conflict resolution, computer instruction, and curriculum development.

K-12 administrator needs

Participants were asked to identify needs of administrators that could be met through use of the ICN. The top three needs identified were:

1. Peer networking to discuss projects or issues such as restructuring, curriculum, scheduling, etc. Peer networking would include statewide or area wide meetings of administrators.

2. Communication with state officials including personnel from the state Department of Education, the Iowa Association of School Boards, and state legislators.

3. State mandated classes or inservices, certification classes, and advanced degree programs.

Other needs discussed were access to special speakers and experts, professional meetings, briefings on recent law changes and reforms, and access to human and family resources.

Offering and accessing regional resources

During the regional focus groups, participants were asked to identify resources available at the local level that could be shared with other regions. During the state-wide needs assessment, participants were asked to identify the primary barriers to offering regional resources over the ICN and the primary barriers to being able to access resources available in other regions. The top three barriers identified for both offering and accessing resources were:

1. Lack of access to ICN classrooms, particularly at the K-12 level. A need was identified to have more ICN classrooms, perhaps even mobile ICN classrooms.

2. Lack of information about what is available and what is needed. Participants indicated that there needs to be a way to identify what is available and a way to let others know what is being offered. A database with easy access through the clearinghouse was identified as a way to address this need.

3. Administrative issues including costs, compensation for speakers, and scheduling activities between schools without common calendars or schedules.

IDEA Needs Assessment
Report A
(identified priorities)

Question 1. What instructional needs for students in kindergarten through twelfth grade could be met by using the ICN?

Region 1:

- Participation in special course offerings not available in the local school curriculum.
- Participation in special units or events that allow students to interact with government leaders, experts in specific areas, and guest lecturers.
- Allowing students to interact positively with students from other sites.

Region 2:

- Actual demonstrations of live presentations - by and for students.
- College courses/additional courses/post-secondary enrollment option courses.
- Special speakers.
- Low enrollment/advanced placement classes.
- Oral practice for foreign languages.

Region 3:

- Sharing completed projects/product with students state-wide/nationally.
- Sharing hypothesis and conducting research/experiments with other students as well as real-life scientists/researchers.
- Searching for information.

Region 4:

- Foreign languages K-12.
- Post Secondary Enrollment Options Act.
- Special (advanced or unavailable course offerings)

Region 5:

- Special activities.
- Offer courses not offered locally, and develop a method for the haves and the have nots to communicate their instructional needs.
- Special college classes.
- Working with the various state associations to develop questions that teachers of that curricular area could investigate, then students could work interactively over the ICN to share findings and investigations.

Region 6:

- Low enrollment classes.
- Advanced placement classes - summer school enrichment.
- Survey courses - special education services for both students and their parents.

Region 7:

- Expanded class offerings including: technical preparation, career exploration, foreign language, specialized areas like "black culture." Exploratory classes at all levels, especially important to smaller schools.
- Upper level classes: advanced placement classes, classes for gifted students, post secondary enrollment option classes.

Region 7 cont.

- Enrichment classes: Exploratory and supplemental classes for a special area, special programs with speakers from outside the classroom.

Region 9:

- Advanced/specialized courses for high school students.
- Exposure to experts/guest speakers.
- Networking between students.

Region 10:

- High school classes-locally determined (no staff, state required staff certification, or low enrollment).
- College credit classes - advanced placement and/or post secondary option classes.
- Special education classes to be integrated with self contained rooms or special events for K-12, like meeting once a month or once a quarter to do shared activities.

Region 11:

- Delivery of live interactive curriculum.
- Wider access to the network would improve the logistics of using it.
- Enrichment of educational units.

Region 12:

- Shared experts.
- Advanced classes.
- Enrichment activities.

Region 13: (Did not prioritize.)

Region 14:

- Advanced placement/college credit/foreign language.
  -Foreign language (French, German, Russian, Japanese, Chinese)
  -Calculus, Advanced Math, Economics, Business Management, Political Science
- Access to experts.
- Team teaching/joint projects.

Region 15:

- TAG
- College courses/additional courses at K-12 level (for language).
- Enrichment activities between schools/unique experiences and demonstrations.

Region 16:

- AP math, English, chemistry, sciences, accounting/geography.
- Foreign languages: Japanese, Chinese, German.
- Study skills/test taking skills/writing lab.
- Student/parent relations/problem solving skills/interviewing skills/speech improvement.

Question 2. How could access to resources, experts, and information needed by K-12 students be enhanced through use of the ICN?

Region 1:

- Creation of a data base that is easily accessed and updated with available resources.
- Providing resources, experts, and information to greater numbers of students at less cost using the ICN.
- Using the ICN network for career education.

Region 2:

- Network libraries (Internet).
- Distance learning speakers and places/student to student.
- Access to experts in the field/stars/legislators/university personnel.

Region 3:

- Our resources are limited by sites, finances, and distance. These barriers will all be eliminated through ICN use.
- Duplication is unnecessary. All resources can be purchased that would not have been possible previously.

Region 4:

- Guest speakers.
- Sharing of instructors across classes and school systems.
- "Merging" or sharing of classes.

Region 5:

- By advertising guest speakers to appear over the ICN many schools could take advantage of a guest speaker and the guest speaker would only have to speak once.
- Students could be linked with resource people at distant locations to enhance lessons for individual classrooms.
- Visual pen pal situations with other teachers or students.

Region 6:

- Internet for all schools - access to information on all topics.
- Guest experts.
- Interstate, national, global exposure made possible.

Region 7:

- Enrichment: ICN used as a forum for people who are experts, specialists, or maybe authors. Useful for career exploration.
- Internet and other on-line telecommunications.
- "Hands on" observations/demonstrations on ICN. Useful in areas of science. Example given was a demo from someone from Iowa Plastics Technology in Waverly.

Region 9:

- Need to further expand the system.
- Need to link to state libraries.
- Need to be able to access various databases.

Region 10:

- Speakers - share time and costs - example, weekly career presentations.
- Common student contests, science fairs, creative works, brainstorming, assessment activities, guest authors for elementary.
- Access to data bases through voice/data connections.

Region 11:

- The ICN would in itself provide the means whereby resources could be shared.
- Access to the Internet for all schools via the ICN would facilitate access to worldwide resources, experts and information.
- Access to career and vocational training could be enhanced via the ICN.

Region 12:

- Centralized information/resources clearinghouse.
- Data networks.
- Pooled resources among schools.

Region 14:

- Internet access through the fiber-optic network with e-mail access to make requests for experts and make available what a school has to offer as well as what they need.
- Access to experts within the community, industry, fine arts, and government. Access to government experts would include regular meetings with area legislators.
- Saving resources by sharing resources between districts.

Region 15:

- Access to data and general information-sharing via Internet, etc.
- Guest speakers and experts.
- Sharing information/interaction with other cultures.

Region 16:

- Experts in particular areas could be accessed (i.e. Dr. Van Allan)/connection/communication to ethnic groups (i.e. Native Indians).
- Internet links to other information databases/networks of electronic mail correspondence.
- Organize electronic fieldtrips/conduct Iowa history state-wide class.

Question 3. What critical staff development or inservice needs for K-12 teachers could be met through use of the ICN?

Region 1:

- Staff training in specific areas, innovative teaching methods, new technologies.
- Providing short inservice activities and eliminating the need for much travel.
- Inter-school meetings for the exchange of ideas, methods, etc.

Region 2:

- Mandated staff development, specialized training.
- Study groups and teacher sharing time.
- Continuing education.

Region 3:

- Restructuring our K-12 to meet the needs of the students is a critical point.
- ICN allows us to access the most up-to-date research/the people resources/and to develop networks and consortia to share knowledge.

Region 4:

- Instructor networking.
- Cooperative learning.
- Distance education technology training.

Region 5:

- New teaching techniques, etc., could be observed in actual settings.
- We have area science teacher meetings which, if held over the ICN could drastically cut down on time out of school.
- Teachers could be exposed to experts in transforming schools to learning communities and via ICN view schools in action that are presently in existence.

Region 6:

- Continuing education/staff development.
- Access to and sharing of AEA staff development, inservice offerings.
- Peer networking.
- "Rules" meetings.

Region 7:

- Meeting together as curriculum departments or specialized departments such as media specialists or guidance counselors. This would be the "job-alike" concept. Forums would be useful for inservice training, demonstrations, or curriculum development.
- Information sharing such as demonstration of new hardware, new software, interesting new products, use of ICN equipment, cooperative buying.
- Recertification and mandatory classes: mandated subjects such as child abuse, etc. Also could be for maintenance staff such as asbestos removal, etc.

Region 9:

- Best teaching strategies.
- Seminars with big name experts.
- Credit courses (graduate).

Region 10:

- Staff development classes.
- Staff in-service sessions.
- Sharing for costly speakers.

Region 11:

- Access to professional development and degree programs.
- The need to establish curriculum groups meeting over the ICN to keep current on tools and strategies.
- A means of having between district group problem solving and planning sessions.

Region 12:

- Recertification and graduate courses.
- Teaching techniques.
- Curriculum coordination.

Region 14:

- Collaborative discipline/grade-level meetings.
- Peer mentor/classroom visitation via the ICN.
- Workshops and inservices in Phase III, curriculum development, CNC instruction, computer instruction, conflict resolution, as well as AEA state-wide courses and Department of Education/federal guideline updates.

Region 15:

- Recertification.
- Training/staff development in all areas.
- Interaction between teachers/peer groups to share information/networking.

Region 16:

- Teacher sharing (ICN/regular classroom)/curriculum support groups.
- Internet training/technology updates.
- ICN techniques.

Question 4. What are needs of K-12 administrators that could be met through use of the ICN?

Region 1:

- Networking with other administrators to discuss current issues and projects.
- Using the ICN network for statewide and area wide meetings to reduce travel time and expense.
- Using the ICN network to exchange curriculum and scheduling information.

Region 2:

- Access to meetings at a distance (was mentioned by both groups).
- Inservices on asbestos, budgeting, anything that requires travel.
- Resource center for human and family needs.

Region 3:

- Administrators will find finances previously spent for travel, lodging, etc. can be redirected for resources for students and teachers.
- Transformation will be consistent.
- Services can be shared rather than duplicated.

Region 4:

- Regional and state superintendents and principals meetings, various inservice offerings, scheduling issues.

Region 5:

- Meeting over the ICN so leaving building is not necessary.
- Many of the same topics were mentioned here as were mentioned for teachers.

Region 6:

- Department of Education/Iowa Association of School Boards communications.
- Recent law changes, forms, reforms.
- Budgeting assistance.

Region 7:

- Staff Development: inservice and mandatory classes.
- Communication with Des Moines officials with more impact by using the ICN and with less travel. An example would be for legislative lobbying.
- Restructuring of schools and education. Issues and concerns.

Region 9:

- Professional meetings.
- Staff development.
- Networking with peers

Region 10:

- Planning meetings - for system use, articulation activities, tech prep initiative.
- Recertification classes/graduate courses for other endorsements.
- Speakers.
- Voice/data connections.

Region 11: (Did not prioritize)

Region 12:

- Regional meetings.
- Department of Education assistance/dialogue
- Data sharing

Region 14:

- State, regional, and local meetings held over the ICN including special education and group home staffings, teacher interviews, administrative workshops and legislative briefings.
- Specialist degrees offered over the ICN.
- E-mail access.

Region 15:

- Certification/advanced degrees.
- Meetings/networking within and out of district.
- Communicate with legislators, Department of Education, etc.

Region 16:

- Knowledge of ICN offerings.
- Access to experts in schools trends.
- Statewide superintendent/principal meetings/cut down on travel costs.

Question 5. ***What resources are available in your region that could be shared with K-12 schools in other regions?***

Region 1:

- Sharing cultural/ethnic/historical/geographical aspects particular to this area of the state.
- Sharing experts in a certain field or discipline with the rest of the state.
- Sharing the technology/industry/agriculture of the area.
- Mobile ICN equipment would enhance any idea expressed.

Region 2:

- Specialized expertise of each school's own personnel.
- Shared curriculum writings and staff development.
- University demonstrations.

Region 3:

- Foreign language instruction - NISDC Grant - they have teachers and students area-wide sharing hypotheses across distances in an interdisciplinary format.

Region 4:

- Northwest Iowa Writers Conference.
- Summer Science Camp (Dr. Veldhuis).
- Geographic interests - local specialists.

Region 5:

- Iowans are overly modest. There were a few suggestions like world's tallest grain elevator, but there were no listings of instructional activities that they would be willing to make available to others. Part of this continues to stem from the belief that to be an instructor over a distance system, you must own a costume with a big "S" on the front and a cape on the back. This "Hollywood mystique" is changing, but too few instructors believe they could ever do this.

Region 6:

- Intercultural activities.
- Business partnerships.
- Community resources.

Region 7:

- Multi-cultures: African-American, Amish, Asian.
- Artist in residency: such as the Ying Quartet in Jessup.
- Local industries: special area of expertise that could be used as an outside speaker or a demonstration over the ICN.

Region 9:

- Advanced placement courses (math/science/foreign language).
- At risk programming.
- Local community experts (i.e. gang/drug awareness).

Region 10:

- Area 10 has a 12 year history of quality distance education. We have a full schedule of high school classes in foreign language, applied academics, career development and vocational education. We also offer college credit classes before and after school hours at our high school sites. We offer a program of weekly staff inservice sessions for all level of teachers and all areas of school personnel. We have proven that collaboration can work between districts in planning and using instructional TV. We would be happy to share any or all of our materials.

Region 11: (Did not prioritize)

Region 12: (Did not prioritize)

Region 14:

- Educational/interest experts:
  -Pilot licensing
  -Civil War/Iowa History
  -Southwest Iowa History
  -Indian War
  -Nature
  -Grant Writing
  -Rain Forests
  -Australia and Russia
  -Quilting
- Community/Educational Services:
  -Green Valley AEA
  -Southwestern Community College
  -Union County Law Enforcement Center
  -Hair Tech
  -Graceland College
- Enhanced learning opportunities.

Region 15:

- Specific cultural resources found within each point of presence.
- Local content/experts in specific fields.
- Local artisans/craft people.

Region 16:

- Physics clubs.
- Mississippi ctudies.
- Amateur radio club.

APPENDIX E

Regional Coordinator Future Survey

Comments from Regional Coordinator Future Survey
September, 1994

In September 1994, after receiving news that Iowa's Star School project would not be funded for a third year, the regional coordinators were asked to respond to a few questions related to the future of the project. Sixteen coordinators representing fourteen regions completed the survey. Their responses are recorded below.

1. In what ways do you see the Iowa Distance Education Alliance continuing?

1. Other sources of funding through grants; reallocation of local money; invitations and involvement of local businesses which allows training for their employees and money for site and equipment.
2. Training (regular college class offerings, pre-service component in education, medical, military); networking all levels; maintenance of clearinghouse and telecommunications possibilities for information delivery.
3. Form a membership-association; join-subset of other distance education groups.
4. Collaboration between educational institutions - partner is essential; regular contact of former Star Schools coordinator, AEA media/technology staff, community college telecommunications staff, K-12 media specialists, etc.. Should be encouraged and facilitated by someone.
5. Continuing communication about distance learning through newsletters and sharing of resources, research, etc..
6. The ICN, by its nature, will dictate the continued evolution of an IDEA. Because schools and colleges will share more and more of their resources and curricula as time goes on, the Alliance should grow naturally. The connections between institutions (and individuals) that Star Schools has provided the impetus for will provide the foundation for this process.
7. Clearinghouse; statewide awareness.
8. Informally continuing to network, visit over phone, perhaps occasional meetings. Mentors established through post-training programs will step forward to continue training aspects.
9. Source for coordination and communication; focus for coordinated efforts (i.e. additional funding sources); networking capability; ability to generate interest.
10. Offering assistance to K-12 and community colleges in way of classroom data (you are already doing this, but only 100-200 copies of this book I feel is not enough). Offering general assistance in way of research data and question answers.
11. A collection of smaller groups drawn together under one roof.
12. To provide an overview for us to read and digest over the next few months. Let's let the dust settle for a while, then determine training needs.
13. Hopefully in a coordinating capacity. There has been, and will be, a need for a "central" point for compilation of data and related information - the IDEA would seem to be an excellent vehicle.
14. Hopefully, we'll continue in communicating ideas and progress with each other.
15. Uncertain with funding . . . would like to continue the Institute and Workshop training.
16. I would like to see the Iowa Distance Education Alliance continue in the efforts to get K-12 schools and students using the ICN. The effort is just beginning, and the teachers need much encouragement, training, and programming ideas. The students need to be exposed to the network from an early age in doses, so that they will become effective users of the network. This work is obviously the job of a distance education alliance.

2. **Describe the roles and responsibilities you see for the following groups in continuing the work begun through the Iowa Star Schools project.**

IPTV

1. Technical support; planning; help finding funding.
2. Technical; master scheduling; long range planning of ICN and coordination of new role for day time scheduling, for IPTV scheduling, and adult education.
3. Keep up efforts for information and demonstration to all community, educational groups.
4. Technical maintenance, consultation - keep the ICN operational. Develop scheduling software that works and put a scheduling computer at all scheduling sites. Develop Part III.
5. Technical support to all operational and oncoming sites. Scheduling.
6. Command and control.
7. Technical.
8. Technical assistance; scheduling.
9. Technical support; coordination; communication.
10. Technical support; Internet assistance.
11. Technical support.
12. Continued guidance and oversight; ideas are communicated quicker and more clearly than they will be by the appointed commission.
13. State wide coordination (administrative and technical); support for regional activities on request.
14. Technical support.
15. Scheduling of Part I, state-wide programming.
16. Technical leadership guidance, information, assistance. Obviously this is a field in which technical change will be constant, and someone needs to stay on top of changes.

Community Colleges

1. Continue as main site; promotion of Phase 3 of ICN project.
2. Regional scheduling; regional technicians; junior college programs.
3. Project a more positive approach; get better coordinated; seek out K-12 appropriate courses they can offer.
4. Regional coordination - RTCs, ICN scheduling, technical support to ICN pop sites, planning support for Part III development.
5. Training initiatives, regional scheduling, technical support as possible to part 2 and 3 sites.
6. Regional resource centers and scheduling.
7. University/regent courses - coordinating own courses.
8. Regional scheduling, experts in distance education, facilitate RTC's meetings.
9. Some can provide technical support; scheduling; communication.
10. Scheduling (regional); general resource.
11. Local leaders.
12. To be the scheduling center of each area to promote all ICN activities and classes in their area.
13. Regional coordination; scheduling; regional training.
14. Scheduling, programming, area support.
15. A central scheduling coordinator for all sites in region.
16. Area scheduling, conduit for technical expertise from IPT, programming for community college credit, and continuing education. The community college can make the network a part of everyone's lives, in this way building network operation and community support.

AEAs

1. Support to community colleges via training and consultant help.
2. K-12 training coordination; on going consulting.
3. K-12 training and support; helping facilitate course sharing, etc.
4. K-12 staff development - ICN training for teachers; K-12 curriculum development for ICN use.
5. Training assistance and information/consulting to K-12s (Part 2 and 3) and libraries.
6. Teacher training/staff development.

98

7. Training and development of activities for the classroom; promote and coordinate Part III activities.
8. Promote use of ICN at K-12 level, some teacher training (will vary between regions with commitment).
9. K-12 teacher education/training; communication.
10. K-12 resource; take charge of training.
11. Local teacher development skills.
12. Provide concise technical information to area educators (i.e. Internet training).
13. You must understand that our AEA has not been very active except as a credit taker. When curtain calls are necessary they have been present.
14. Area support for training and materials for use in the ICN classrooms.
15. Share with community colleges - staff development.
16. K-12 programming and teacher training, inservice for teachers. Conduit to K-12 for technical expertise of IPT, source of training for data users of ICN, Internet, etc.

Universities

1. Connection to K-12 for advanced courses; connection to graduate programs.
2. Preservice instruction; continue expanding offerings; additional workshops to update professionals (updating Persuasion files for latest news and research).
3. Preservice awareness - create the expectation in new teachers that they will use the ICN. Keep Iowa in the forefront of distant education nationally and internationally.
4. Training and resource development - videos and research.
5. Some TEA function, especially teacher training.
6. Will offer programming statewide - research information available.
7. Teacher education/training; communication.
8. Assist in training and make these vast resources available.
9. Develop higher education.
10. To provide upper level and graduate classes, to provide a training model for teachers.
11. Training, inservice, preservice.
12. Continued offerings of needed graduate level courses.
13. Offering of courses on ICN.
14. Universities should strive to bring on the network entire programs and classes that will make a college degree, undergraduate or graduate, available to those who cannot easily attend the campus of the university. Access to advanced education!

Department of Education

1. Prioritizing distance education.
2. Implement Technology Commission recommendations; work on funding; Internet and information access curriculum; military and opening sites for community access.
3. Be more evident in supporting the medium.
4. Contact the regional schedules before scheduling an ICN site.
5. Establish a department of Distance Education to help schools and AEA's with standards, policies, and procedures.
6. Elaborate distance education policies.
7. Work on legislative awareness and need of education community.
8. Coordination and communication.
9. Continue to push the ICN and assist in funding and legislation.
10. General overall education released over ICN.
11. To stay out - unless they want to re-write the rule about secondary classes taught only by a person with secondary certification.
12. None.
13. Continued offering of in-services and support to AEAs.
14. Seminars and staff development.
15. Leadership and encouragement in use of distance education via ICN.

Others

1. Business - money and sharing site.
2. Legislature - funding.
3. Legislators: they need to inform themselves for benefits and needs. This is something we need to all do.

3. Describe how you see the future role of the Clearinghouse.

1. Networking - talk sessions or forums; information transmitted; scheduling information.
2. I'm not very optimistic that it will be useful to the majority of K-12, unless the Matchmaker is totally comprehensive. Depends on familiarity of individuals with Internet.
3. It didn't get off the ground. We still need a source of information about distance education in the nation as well as Iowa. Especially classes being offered.
4. Establish and maintain the critical database for all institutions to access for ICN scheduling.
5. Imperative need now for information to teachers without coordinators.
6. Dissemination of information.
7. Better materials supplied.
8. Continued support for merged areas.
9. To offer an ongoing statewide schedule via Iowa Data Base.
10. The most important function of the Clearinghouse as I see it is to share information about offerings on the ICN, to give sites an opportunity to participate, or to give them ideas of their own to originate programming.

4. What are the primary issues that you believe will affect the successful use of the ICN for education?

1. Getting an information base to K-12, businesses, and higher education. Selling the idea as valuable for future of education.
2. Common K-12 daily schedules; easy access to schedule and openings on Mac and DOS platforms.
3. Funding. Education.
4. A commitment from the AEA's to continue (or start) distance education, staff development, and curriculum development activities. Funding. Funding. Funding.
5. Funding for scheduling.
6. Money: unresolved questions of operating costs, maintenance costs, usage costs. Acceptance by Education Administrators of the new paradigm that ICN represents. A radical new degree of cooperation and communication must take place among all educators.
7. Ability to schedule fairly.
8. The need for support of existing system and adding additional sites (with support).
9. Funding for support function; funding for expansion.
10. Scheduling; line cost $5 per hour; room cost/ICN cost to schools to run.
11. Support in all areas: education, financial, technical.
12. Funding; cost; lack of space.
13. Scheduling (priority time); continued training to teachers; constant encouragement and positive usage of the system; communication.
14. Scheduling; access to an ICN classroom for all schools; teacher compensation.
15. Funding of Part III, more classrooms in Iowa - we are woefully short of classrooms even in areas where we have a site. Leadership - where will it come from? I am afraid our work will die on the vine because of lack of strong leadership.

APPENDIX F

Iowa Opinions About Distance Education

Iowa Distance Education Alliance
Demonstration Survey

We would like your opinions about distance education in Iowa using two-way, full-motion, interactive technology. Please darken the appropriate circle with a #2 pencil.

1. I am *1 = male* *2 = female*

2. My age is *1 = 25 or under* *2 = 26-35* *3 = 36-45* *4 = 46-55* *5 = 56-65* *6 = over 65*

3. Indicate the highest level of education completed
   - *1 = some high school*
   - *2= completed high school*
   - *3 = some college, but no degree*
   - *4 = completed a 2-year degree*
   - *5 = completed a 4-year degree*
   - *6 = some postgraduate study*
   - *7 = completed a postgraduate degree*

4. Prior to this demonstration, how much did you know about distance education in Iowa using two-way interactive technology?
   1 = almost nothing *2 = a little* *3 = some* *4 = quite a bit* *5 = a great deal*

5. How helpful was this demonstration in increasing your knowledge about distance education in Iowa?
   1 = not helpful *2 = somewhat helpful* *3 = helpful* *4 = very helpful*

Use the following scale to indicate your level of agreement with items 6 through 18.

1 = strongly disagree 2 = disagree 3 = undecided 4 = agree 5 = strongly agree

---

6. Students can learn as much through interactive distance education as they can learn in a traditional classroom setting.
7. Students need to be face-to-face with the teacher to learn effectively.
8. Student discipline will be a greater problem in an interactive distance education class.
9. Local control of the curriculum will be lost by using interactive distance education.
10. There will be fewer teaching positions with increased use of interactive distance education.
11. All teachers should receive training on how to teach at a distance.
12. In interactive distance education classes, teachers at remote sites need to know the course subject matter well.
13. Interactive distance education will benefit large school districts.
14. Interactive distance education will benefit small school districts.
15. Interactive distance education is more appropriate for teaching students at the secondary level than at the elementary level.
16. I believe that distance education is important in providing access by schools to resources such as computer databases, educational experts, and networking.
17. I believe interactive distance education will benefit K-12 education in Iowa.
18. I believe use of interactive distance education will improve Iowa students' abilities to succeed in a technological world.

OVER---->

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

NCS Trans-Optic® M10-6659 20 A2804-8

Please comment on the greatest benefits to using interactive distance education for teaching K-12 students.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Please comment on the greatest drawbacks to using interactive distance education for teaching K-12 students.

Characteristics of Participants Responding to Demonstration Surveys
Total Number Responding = 1385

Variable	Number	Percent
Gender		
Male	609	44.0%
Female	766	55.3%
Missing	10	0.7%
Group		
Student	221	16.0%
Instructor	475	34.3%
Public	364	26.3%
Other Educational Group	299	21.6%
Missing	26	1.9%
Age		
25 or under	230	16.6%
26-35	171	12.3%
36-45	418	30.2%
46-55	341	24.6%
56-65	134	9.7%
Over 65	82	5.9%
Missing	9	0.6%
Highest Education Level		
Some High School	80	5.8%
Completed High School	134	9.7%
Some College - No Degree	211	15.2%
Completed 2-yr Degree	59	4.3%
Completed 4-yr Degree	135	9.7%
Some Postgraduate Study	308	22.2%
Completed Postgraduate Degree	445	32.1%
Missing	13	0.9%

Region	Number	Percent
AEA/Community College Region		
I	281	20.3%
II	0	0.0%
III	0	0.0%
IV	72	5.2%
V	127	9.2%
VI	53	3.8%
VII	179	12.9%
IX	34	2.5%
X	46	3.3%
XI	181	13.1%
XII	106	7.7%
XIII	0	0.0%
XIV	0	0.0%
XV	110	7.9%
XVI	120	8.7%
IPTV	76	5.5%

Indicate your level of knowledge of distance education in Iowa.

	Value	Number*	Percent
Almost Nothing	1	455	32.9%
A Little	2	377	27.2%
Some	3	380	27.4%
Quite a bit	4	137	9.9%
Extensive	5	30	2.2%
Mean	2.10		

* - 1379 of 1385 responded

Indicate the helpfulness of this demonstration in increasing your knowledge.

	Value	Number*	Percent
Not Helpful	1	22	1.6%
Somewhat Helpful	2	186	13.4%
Helpful	3	630	45.5%
Very Helpful	4	493	35.6%
Mean	3.20		

* - 1333 of 1385 responded

Participant Responses to Demonstration Surveys

Items related to interactive distance education	5 - Strongly agree	4 - Agree	3 - Undecided	2 - Disagree	1 -. Sirongly disagree	Number of Responses	Mean	S.D.
Students can learn as much through interactive distance education as they can learn in a traditional classroom setting.	14%	42%	28%	13%	3%	1356	3.50	0.99
Students need to be face-to-face with a teacher to learn effectively.	10%	47%	23%	16%	4%	1361	3.43	0.98
Student discipline will be a greater problem in a distance classroom.	6%	26%	37%	24%	6%	1362	3.02	1.00
Local control of the curriculum will be lost.	14%	51%	24%	9%	2%	1360	3.65	0.90
There will be fewer teaching positions.	7%	33%	29%	25%	6%	1356	3.10	1.03
All teachers should receive training on how to teach at a distance.	21%	44%	16%	16%	3%	1356	3.64	1.08
Teachers at remote sites need to know course subject matter well.	29%	39%	15%	14%	2%	1349	3.78	1.08
Interactive distance education will benefit large school districts.	15%	57%	19%	7%	2%	1355	3.77	0.85
Interactive distance education will benefit small school districts.	33%	54%	9%	3%	2%	1361	4.13	0.82
Interactive distance education is more appropriate for teaching students at the secondary level than at the elementary level.	11%	31%	27%	25%	6%	1353	3.17	1.10
Distance education is important in providing access to resources such as computer databases, educational experts, and networking.	27%	54%	14%	4%	2%	1330	4.01	0.85
Interactive distance education will benefit K-12 education in Iowa.	25%	51%	17%	4%	3%	1352	3.92	0.91
Interactive distance education will improve Iowa students' abilities to succeed in a technological world.	31%	48%	16%	4%	2%	1358	4.02	0.89

Summary of Categorized Demonstration Comments from Year One and Year Two Entire Project Duration

Topic of Comment	N
Greatest benefit of using interactive television*	
More class selection/classes not offered by school	134
Access to experts/resources	59
Increase access to educational opportunities	53
Classes for small rural schools	45
Prepares for technological future	38
Sharing resources among schools/effective use of resources	36
Specialized classes	33
Exposure to more instructors/use of best instructors	31
Time or cost savings	30
Information access/data access	28
Interactivity with other students	27
Student motivation and interest	25
Awareness of others/global education	22
Advanced placement/advanced courses	21
Enrichment activities	13
Do not see benefit	11
Inservice/training	9
Meetings	8
Teacher/administrator networking/peer mentoring	6
Greatest drawback of using interactive television**	
Discipline problems/need for supervision/class management	103
Lack of direct (face-to-face) contact	88
Cost	66
Maintaining student-teacher interaction	66
Scheduling problems	44
Access to site/facility	34
Need for teacher training	30
Equipment/technical problems	29
Resistance to or fear of change/adapting to new technology	25
Not appropriate for lower grades	22
Loss of teacher jobs/fear of losing job	21
Need highly motivated students/not good for some students	16
No drawbacks foreseen	14
Awareness of appropriate and inappropriate use of the system	14
Accommodating students with special needs	13
Hands on activities difficult	11
Critical issues - copyright, contracts, etc.	10
Maintaining student attention	10
Impact on student social skills	9
Teacher preparation time	8
Not much offered/information not available about offerings	5
Loss of local autonomy/local innovation	4
System security	3
Inhibits school reorganization	3
Don't know	3
Technology not used to its full potential	2
Leadership/vision difficulties	1
Logistics of transferring materials	1

---

* Includes multiple responses from 484 of 1385 respondents.

** Includes multiple responses from 478 of 1385 respondents.

APPENDIX G

Student Opinions About Distance Education

Iowa Distance Education Alliance
Student Survey
For Students Taking Classes Over the ICN or Other Interactive Technology
Middle School/Junior High/High School

Please darken the appropriate circle with a #2 pencil.

1. I am *1=male* *2=female*
2. My ethnic origin is *1=Caucasian* *2=Black American* *3=Asian/Pacific Islander* *4=Hispanic* *5=Native American* *6=Other*
3. My grade is *1=5th grade* *2=6th grade* *3=7th grade* *4=8th grade* *5=9th grade* *6=10th grade* *7=11th grade* *8=12th grade*
4. Number of distance education courses you have taken (including this one). *If 10 or more, darken the '0'.*
5. Are you taking this class at an origination or remote site? *1=origination* *2=remote*

Use the following scale to indicate your level of agreement with items 5 through 27.

1 = strongly disagree
2 = disagree
3 = agree
4 = strongly agree
5 = not applicable

6. It is easy to use the microphone.
7. It is easy to see the TV monitor.
8. It is easy to hear comments made by students at the other site.
9. Graphics and other visuals are easy to read on the monitors.
10. I feel the TV teacher is available to answer my questions.
11. It is easy to pay attention to the TV teacher on the TV monitor.
12. I feel encouraged to become involved in class discussions and activities.
13. The TV teacher pays attention to students at the remote site during class.
14. The class is well organized.
15. I feel the TV teacher is speaking directly to me.
16. The fact that I am "on TV" inhibits my class participation.
17. I feel like I am a part of the class.
18. I pay as much attention in the interactive TV class as I do in a regular class.
19. Students are more disruptive in the TV class than in a regular class.
20. I am learning as much in the interactive television class as I would in a regular class.

OVER--------->

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

100 1.0

Name of course

____

Town and School where you are taking this class

(Town)______________________________

(School)______________________________

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

21. Technical problems interfere with my learning in the TV classroom.

22. I know how to report technical problems.

23. I feel the students at the other site(s) are very much a part of my class.

24. I would tell my friends to take an interactive television class.

25. I would take another interactive television class.

26. Overall, I am satisfied with my interactive television class.

27. It is easy to get information about interactive television classes that are available.

28. List two things you like best about taking an interactive television class.

29. List two things about the interactive television class that you would like to change or improve.

Summary of K-12 Student Information
177 Student Surveys Returned

Gender	Number	Percent
Male	91	52%
Female	85	48%

Class taken at:	Number	Percent
Origination site	43	24%
Remote site(s)	129	73%
No Response	5	3%

Grade Level	Number	Percent
5th grade	1	1%
8th grade	37	21%
9th grade	18	10%
10th grade	12	7%
11th grade	53	30%
12th grade	55	31%
No Response	1	1%

Ethnic Origin	Number	Percent
Caucasian	164	93%
Black American	3	2%
Hispanic	2	1%
Asian Pacific Islander	1	1%
Other	2	1%
No Response	5	3%

Number of Distance Education Courses Taken

	Number	Percent		Number	Percent
One	136	77%	Five	1	1%
Two	17	10%	Six	4	2%
Three	6	3%	Ten or more	5	3%
Four	3	2%	No Response	5	3%

Type of Classes Represented and Numbers of Students

Subject Area	Number of Classes	Number of Students	Percent of Sample
Mathematics	3	47	27%
Science	2	13	7%
Literacy	3	44	25%
Foreign Language	6	51	29%
Vocational Education	1	12	7%
Other	1	10	6%

IDEA Regions Represented

Region	Number of Classes	Number of Students	Percent of Sample
4	2	2	1%
6	3	23	13%
7	4	72	41%
10	5	55	31%
15	2	25	14%

Summary of K-12 Student Survey Responses 177 Surveys Returned

Indicate Level of Agreement	1- Strongly Disagree	2- Disagree	3- Agree	4- Strongly Agree	Valid Responses	Not Applicable	No Response	**Mean**	**S.D.**
It is easy to use the microphone.	0%	7%	52%	41%	173	2	2	3.34	0.61
It is easy to see the TV monitor.	1%	1%	52%	46%	171	4	2	3.43	0.58
It is easy to hear comments made by students at the other site.	4%	17%	57%	23%	175	1	1	2.98	0.75
Graphics and other visuals are easy to read on the monitors.	2%	21%	60%	17%	174	2	1	2.92	0.68
I feel the TV teacher is available to answer my questions.	6%	12%	53%	29%	162	13	2	3.06	0.80
It is easy to pay attention to the TV teacher on the TV monitor.	3%	22%	56%	18%	158	16	3	2.90	0.72
I feel encouraged to become involved in class discussions and activities.	4%	20%	52%	25%	173	2	2	2.98	0.77
The TV teacher pays attention to students at the remote site during class.	2%	8%	51%	39%	169	7	1	3.27	0.69
The class is well organized.	1%	16%	60%	24%	174	2	1	3.07	0.64
I feel the TV teacher is speaking directly to me.	4%	33%	49%	14%	167	9	1	2.73	0.76
The fact that I am "on TV" inhibits my class participation.	8%	33%	35%	24%	161	13	3	2.76	0.91
I feel like I am part of the class.	1%	6%	69%	23%	172	3	2	3.15	0.57

Summary of Student Survey Responses (Continued)

Indicate Level of Agreement	1- Strongly Disagree	2- Disagree	3- Agree	4- Strongly Agree	Valid Responses	Not Applicable	No Response	Mean	S.D.
I pay as much attention in the interactive TV class as I do in a regular class.	6%	28%	50%	16%	173	2	2	2.75	0.80
Students are more disruptive in the TV class than in a regular class.	14%	34%	37%	15%	175	0	2	2.54	0.91
I am learning as much in the interactive television class as I would in a regular class.	15%	17%	45%	22%	170	6	1	2.75	0.97
Technical problems interfere with my learning in the TV classroom.	9%	33%	48%	11%	162	9	6	2.61	0.80
I know how to report technical problems.	15%	40%	33%	12%	153	18	6	2.42	0.89
I feel the students at other site(s) are very much a part of my class.	8%	18%	56%	17%	167	6	4	2.83	0.81
I would tell my friends to take an interactive telelvision class.	11%	14%	47%	28%	169	2	6	2.92	0.93
I would take another interactive television class.	11%	9%	49%	31%	167	6	4	2.99	0.93
Overall, I am satisfied with my interactive television class.	8%	9%	52%	31%	170	2	5	3.05	0.86
It is easy to get information about interactive television classes that are available.	17%	41%	32%	11%	168	5	4	2.37	0.89

Summary of Categorized Student Survey Comments
177 Surveys Returned

Category	Number of Students Mentioning
List two things you like best about taking an interactive television class.	
You can see/talk to/meet other students	80
It is a new learning experience	28
You can learn with/from other students	15
You can take courses not available at your school	15
It is fun and interesting	13
Using the equipment/microphones	12
There is better student/teacher interaction and more discussion	11
Exposure to new technology	10
It is easy	8
It is a more relaxed atmosphere	5
You get other/better teachers	5
Nothing	4
Students have more responsibility for learning	4
Bus ride/driver	3
Using the equipment/microphones	3
You can learn from experts	3
You get to watch TV	3
Comfortable chairs for sleeping/do not have to pay attention	2
Learn about computers	2
Learn as much or more as a regular class	2
The classes are smaller	2
There is more time for homework	2
You get to miss class	2
It is more hands-on	1
Chance to earn college credit	1

117

Summary of Categorized Student Survey Comments
177 Surveys Returned

Category	Number of Students Mentioning
List two things about the class you would like to change or improve	
Fewer technical problems/ better audio or video	38
More time	36
Nothing	16
Better or more microphones	15
Improve interaction	14
Better instruction/better instructor	12
Be able to see all the locations	11
Less disruptive student behavior	8
Some face-to-face interaction, individualized attention	6
Bigger TV screen	6
Better turn around time for tests/assignments	5
More field trips, activities	4
Eliminate scheduling problems	4
Location/taking bus	4
Classroom equipment (pencil sharpener, etc.)	4
Classroom at the school	4
Better or more visuals and teaching materials	3
Help students become less nervous/more comfortable	3
Smaller class size	2
Easier to contact the teacher	2
Administrative cooperation	1
Grades	1
Less homework	1
Everything	1
More course offerings	1
Warning before end of class	1

Significant differences between male and female students on K-12 ICN evaluations

EVALUATON ITEMS	Males			Females			T-value	Probability
	Mean	N	S.D.	Mean	N	S.D.		
Easy to use microphone	3.31	87	0.62	3.36	85	0.60	-0.59	0.557
Easy to see TV	3.45	85	0.61	3.40	85	0.56	0.52	0.600
Easy to hear comments	3.07	89	0.75	2.88	85	0.73	1.65	0.101
Visuals easy to read on monitors	2.91	89	0.75	2.92	84	0.61	-0.06	0.950
TV teacher available for questions	3.09	80	0.85	3.01	81	0.75	0.60	0.551
Easy to pay attention	2.90	78	0.78	2.89	79	0.66	0.10	0.922
Feel encouraged to become involved	2.90	87	0.78	3.06	85	0.75	-1.40	0.165
TV teacher pays attention to remote students	3.34	88	0.68	3.19	80	0.70	1.45	0.149
Class is well organized	3.11	89	0.59	3.01	84	0.69	1.03	0.303
Feel TV teacher speaking directly to me	2.81	85	0.75	2.67	81	0.74	1.25	0.211
Being on TV inhibits my participation	2.83	83	0.96	2.68	77	0.83	1.09	0 .276
Feel part of the class	3.14	86	0. 62	3.14	85	0.52	-0.02	0.985
Pay as much attention as in regular class	2.78	87	0.87	2.69	85	0.71	0.72	0.470
Students are more disruptive	2.53	89	0.97	2.56	85	0.85	-0.26	0.792

Significant differences between male and female students on K-12 ICN evaluations (continued)

EVALUATON ITEMS	Males			Females			T-value	Probability
	Mean	N	S.D.	Mean	N	S.D.		
Learning as much	2.64	86	1.07	2.84	83	0.85	-1.37	0.172*
Technical problems interfere	2.67	82	0.89	2.56	79	0.69	0.91	0.366*
Know how to report technical difficulties	2.54	78	0.98	2.28	74	0.77	1.79	0.075*
Feel students at other sites are part of my class	2.88	86	0.82	2.75	80	0.80	1.06	0.290
Would tell friends to take ITV class	2.80	86	1,05	3.02	82	0.77	-1.57	0.119*
Wold take another ITV class	2.88	86	1.01	3.10	80	0.82	-1.51	0.134
Satisfied with ITV class	3.00	88	0.95	3.09	81	0.75	-0.66	0.509*
Easy to get information about ITV classes that are available	2.27	88	0.97	2.48	79	0.78	-1.52	0.131

* ***Separate t-test used due to unequal variance***

Scale: 1 = strongly disagree 2 = disagree 3 = agree 4 = strongly agree

Significant differences between origination and remote site students on K-12 ICN evaluations

EVALUATON ITEMS	ORIGINATION			REMOTE			T-value	Probability
	Mean	N	S.D.	Mean	N	S.D.		
Easy to use microphone	3.10	42	0.53	3.41	127	0.61	-2.99	0.003
Easy to see TV	3.37	41	0.54	3.45	126	0.56	-0.87	0.387
Easy to hear comments	2.98	42	0.78	2.96	128	0.74	0.11	0.909
Visuals easy to read on monitors	2.66	41	0.69	2.99	128	0.66	-2.79	0.006
TV teacher available for questions	2.80	30	1.03	3.11	127	0.70	-1.56	0.126*
Easy to pay attention	2.58	26	0.90	2.95	128	0.67	-1.98	0.057*
Feel encouraged to become involved	2.88	42	0.92	3.00	127	0.71	-0.77	0.445*
TV teacher pays attention to remote students	3.32	41	0.69	3.25	124	0.69	0.54	0.591
Class is well organized	2.93	42	0.64	3.10	127	0.64	-1.52	0.129
Feel TV teacher speaking directly to me	2.77	35	0.73	2.72	127	0.76	0.33	0.745
Being on TV inhibits my participation	2.76	42	0.98	2.77	115	0.88	-0.02	0.984
Feel part of the class	3.05	41	0.67	3.17	127	0.54	-1.21	0.227
Pay as much attention as in regular class	2.65	40	1.00	2.76	128	0.72	-0.63	0.530*
Students are more disruptive	2.64	42	0.91	2.52	129	0.92	0.76	0.449

Significant differences between origination and remote site students on K-12 ICN evaluations (continued)

EVALUATON ITEMS	ORIGINATION			REMOTE			T-value	Probability
	Mean	N	S.D.	Mean	N	S.D.		
Learning as much	2.10	40	1.06	2.94	127	0.86	-5.06	0.000
Technical problems interfere	2.78	40	0.92	2.56	119	0.76	1.45	0.149
Know how to report technical difficulties	2.05	37	0.82	2.53	112	0.87	-2.91	0.004
Feel students at other sites are part of my class	2.63	40	0.93	2.87	123	0.77	-1.66	0.098
Would tell friends to take ITV class	2.49	41	1.17	3.05	124	0.81	-2.86	0.006*
Would take another ITV class	2.49	39	1.17	3.15	124	0.78	-3.30	0.002*
Satisfied with ITV class	2.59	41	1.10	3.18	126	0.71	-3.28	0.002*
Easy to get information about ITV classes that are available	2.08	40	0.86	2.45	124	0.88	-2.37	0.019

* ***Separate t-test used due to unequal variance***

Scale: 1 = strongly disagree 2 = disagree 3 = agree 4 = strongly agree

APPENDIX H

Teacher Opinions About Distance Education

Iowa Distance Education Alliance
Teacher Survey
For Teachers Using the ICN or Other Interactive Technology

Last four digits of your socia. security number ____________________

Please darken the appropriate circle with a #2 pencil.

1. I am *1=male* *2=female*
2. My age is
   1=25 and under *2=26 to 35* *3=36 to 45* *4=46 to 55* *5=56 and over*
3. Years of teaching experience
   1=0-3 years *2=4-6 years* *3=7-10 years*
   4=11-15 years *5=16-20 years* *6=more than 20 years*
4. Is this your first experience using interactive distance education technology?
   1=yes *2=no*
5. Indicate your previous level of experience with distance education using interactive television.
   1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*
6. Type of distance education activity in which I am currently involved
   1=teaching an entire course
   2=teaching a partial course (more than 1 class session but not entire course)
   3=supplementary course activity
7. Indicate the number of remote sites involved (if 10 or more, darken the '0').

Use the following scale to indicate your level of agreement with items 8 through 29.

1=strongly disagree *2=disagree* *3=agree* *4=strongly agree* *5=not applicable*

8. The interactive system allows appropriate use of media materials.
9. The equipment in the interactive classroom is of high quality.
10. The physical layout of the interactive classrooms is conducive to student learning.
11. It is easy to manage the equipment while I am teaching.
12. There is no difficulty getting materials to the remote site students.
13. Technical problems with the system interfere with student learning.
14. Remote site students learn as much as the origination site students.
15. I felt successful in encouraging remote site students to become involved in class discussions and activities.
16. Providing for the social and emotional needs of students at remote sites is difficult.
17. I encountered more discipline problems at remote sites than at the origination site.
18. Preparing materials for interactive classes takes more time than for regular classes.
19. The interactive class environment allows me to experiment with new teaching techniques.
20. I am confident about my abilities as an interactive television teacher.

OVER--------->

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

BEST COPY AVAILABLE

List two things you like best about teaching in an interactive television class.

List two things about the interactive television class that you would like to change or improve.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

21. I am as effective teaching in an interactive class as I am in a regular class.

22. There are specific skills that an interactive television teacher needs in order to be successful.

23. Teachers using the interactive system in my school receive effective training in distance education techniques.

24. Procedures for using the interactive system are clear and reasonable.

25. Technical support is readily available.

26. My school is supportive of interactive distance education.

27. Distance education is an effective way for students to learn.

28. Teaching in an interactive television classroom was a positive experience for me.

29. I would encourage my colleagues to teach over the interactive system.

For questions 30-32 indicate whether you would like to receive additional training in the following areas. *1=yes* *2=no*

30. How to effectively use the equipment in the interactive classroom.

31. Planning instruction for use over an interactive television system.

32. Techniques for enhancing teacher-student interaction *(for example: maintaining student attention and behavior; encouraging student participation in class discussions; increasing interaction between remote and origination site students).*

33. Name of course: ____________________

34. Grade level of course: ____________________

35. Origination site: ____________________

36. Remote site(s): ____________________

____

____

Summary of Teacher Information
8 surveys returned

Gender

	Number	*Percent*
Male	3	38%
Female	5	63%

Age

	Number	*Percent*
25 and under	2	25%
26 to 35	1	13%
36 to 45	1	13%
46 to 55	4	50%

Years of teaching experience

	Number	*Percent*
0 - 3 years	3	38%
More than 20 years	5	63%

First experience using distance education technology

	Number	*Percent*
Yes	6	75%
No	2	25%

Subject Areas:

	Number	*Percent*
Mathematics	3	38%
Science	1	13%
Literacy	2	25%
Foreign Language	2	13%
Vocational Education	1	13%
Other	0	0%

Origination site(s) used:

1. Cedar Rapids Washington
2. Grant Wood
3. Keosauqua
4. Albia
5. Mapleton
6. Le Mars

Previous experience with distance education

	Number	*Percent*
None	6	75%
Some	1	13%
Extensive	1	13%

Current distance education activity

	Number	*Percent*
Teaching an entire course	6	75%
Supplementary course activity	2	25%

Number of remote sites involved

	Number	*Percent*
One	2	25%
Two	1	13%
Three	2	25%
Four	2	25%
Ten or more	1	13%

Would like additional training in:

	Number	*Percent*
Effective use of equipment	4	57%
Instruction planning	6	86%
Interaction techniques	5	71%

Names of courses/activities taught and grade level:

1. Russian II, III; 9-12
2. Environmental Science; 9-12
3. Technical Math; 9-12
4. Directions; 11-12
5. Russian I; 9-12
6. Problem Solving/3-12
7. Pen Pals/second grade
8. AP Composition; 12
9. Probability and Statistics; 10-12

Remote site(s)used:

1. Benton
2. Anamosa
3. Solon
4. Vinton
5. Clarence-Cowden
6. Cedar Rapids Jefferson
7. Cedar Rapids Kennedy
8. Lisbon
9. Lin-Mar
10. Cherokee
11. Sioux City
12. Denison
13. Le Mars
14. Guthrie Center
15. Chariton
16. Bloomfield
17. Corydon

Summary of Teacher Survey Responses 8 Surveys Returned

Indicate Level of Agreement	1- Strongly Disagree	2- Disagree	3 -Agree	4- Strongly Agree	Valid Responses	Not Applicable	No Response	Mean	S.D.
The interactive system allows appropriate use of media materials.	0%	0%	50%	50%	8	0	0	3.50	0.54
The equipment in the interactive classroom is of high quality.	0%	0%	13%	88%	8	0	0	3.88	0.35
The physical layout of the classroom is conducive to learning.	13%	13%	63%	13%	8	0	0	2.75	0.89
It is easy to manage the equipment while I am teaching.	0%	0%	71%	29%	7	1	0	3.29	0.49
There is no difficulty getting materials to the remote site students.	14%	14%	43%	29%	7	1	0	2.86	1.07
Technical problems with the system interfere with student learning.	38%	13%	38%	13%	8	0	0	2.25	1.17
Remote site students learn as much as the origination site students.	0%	25%	25%	50%	8	0	0	3.25	0.89
I felt successful in encouraging remote site students to become involved in class discussions and activities.	0%	0%	50%	50%	8	0	0	3.50	0.54
It is difficult to provide for the social and emotional needs of students at remote sites.	0%	29%	29%	43%	7	1	0	3.14	0.90
There are more discipline problems at remote sites.	33%	33%	33%	0%	6	2	0	2.00	0.89
Preparing materials for interactive classes takes more time than for regular classes.	0%	14%	57%	29%	7	1	0	3.14	0.69

Summary of Teacher Survey Responses (Continued)

Indicate Level of Agreement	1- Strongly Disagree	2- Disagree	3 -Agree	4- Strongly Agree	Valid Responses	Not Applicable	Not Applicable	Mean	S.D.
The interactive class environment allows me to experiment with new teaching techniques.	0%	13%	50%	38%	8	0	0	3.25	0.71
I am confident aobut my abilities as an interactive television teacher.	0%	0%	57%	43%	7	1	0	3.43	0.54
I am as effective teaching an interactive class as I am a regular class.	14%	0%	71%	14%	7	1	0	2.86	0.90
There are specific skills that an interactive television teacher needs in order to be successful.	0%	0%	57%	43%	7	1	0	3.43	0.54
Teachers using the interative system in my school receive effective training in distance education techniques.	29%	0%	57%	14%	7	1	0	2.57	1.13
Procedures for using the interactive system are clear and reasonable.	0%	13%	75%	13%	8	0	0	3.00	0.54
Technical support is readily available.	0%	0%	88%	13%	8	0	0	3.13	0.35
My school is supportive of interactive distance education.	0%	25%	25%	50%	8	0	0	3.25	0.89
Distance education is an effecive way for students to learn.	0%	0%	75%	25%	8	0	0	3.25	0.46
Teaching an interactive television class was a positive experience.	0%	0%	43%	57%	7	1	0	3.57	0.54
I would encourage colleagues to teach over the interactive system.	0%	13%	63%	25%	8	0	0	3.13	0.64

Teacher Survey Comments
8 Surveys Returned

List two things you like best about teaching in an interactive television class.

1. The Elmo visual presenter; interaction with other schools.
2. The students themselves make it worth it!
3. In some instance it challenges students to put forth more effort since they only have access to the teacher for 50 minutes instead of eight hours.
4. I like the small classes and the discussions. I like working with three different sites and thus three different groups of students.
5. Discussion opportunities with greater variety of students; opportunity to share teaching/learning styles and materials.

List two things about the interactive television class that you would like to change or improve.

1. I would like to improve the presence and discipline maintained by monitors and more communication with the monitors.
2. Scheduling needs to be improved so that ITFS teachers get a break. Since we are required to hold class if just one school is in session, the 1993-1994 school year totaled 188 days with students. The schedule did not provide any days without students for conferences, figuring grades, staff or professional development, etc.
3. Need to design a better method.
4. The use of tables as opposed to individual desks; not being able to see my television students.
5. I would like more mobility and variety of options in the room arrangement; permission to show copyright materials.

APPENDIX I

Preservice Technology Survey

IOWA INSTITUTIONS OFFERING TEACHER EDUCATION
TECHNOLOGY SURVEY

INSTITUTION ______________________________

RESPONDENT'S NAME ______________________________

Part One: Faculty Training

In column A please indicate to what extent each of the following distance education training approaches are provided for faculty at your institution. In column B indicate to what extent you believe these training opportunities should be provided.

	A Current Status (Extent of Involvement/Use) Not at all — To a great extent	B Ideal Status (Extent would like to use) Not at all — To a great extent	A Comments column is provided if further explanation is appropriate. Comments
1. On-Site training by:	1 2 3 4 5 6 7.	1 2 3 4 5 6 7	
a. Faculty Member	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
b. Outside Expert	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
c. Satellite Teleconference	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
5. Conferences	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
a. State	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
b. Regional	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
c. National	1 2 3 4 5 6 7	1 2 3 4 5 6 7	

Part Two: Faculty Access to Technology

In column A, indicate to what Education faculty at your institution have access to the following technologies. In column B, indicate to what extent you would like to provide faculty access to these technologies.

	A Not at all — To a great extent	B Not at all — To a great extent	Comments
1. Traditional Media (Overhead, Slide projector, Camcorder, VCR)	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
2. Microcomputers	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
3. Central "Host" Computers (Campus Mainframe)	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
4. Multimedia Systems (Computer Based)	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
5. CD-ROM	1 2 3 4 5 6 7	1 2 3 4 5 6 7	

Part Two: Faculty Access to Technology (continued)	A Current Status (Extent of Involvement/Use) Not at all — To a great extent	B Ideal Status (Extent would like to use) Not at all — To a great extent	A Comments column is provided if further explanation is appropriate. Comments
6. Telecommunications	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
a. Television (Broadcast, Satellite, Closed Circuit)	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
b. Audio Teleconferencing	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
c. Video Teleconferencing	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
d. Interactive Instructional Television	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
e. Computer Teleconferencing	1 2 3 4 5 6 7	1 2 3 4 5 6 7	
7. What are the three most important technologies used by your faculty? ➾	a.	b.	c.

Part Three: Student Access to Technology

In column A, indicate to what your education students have access to the following technologies. In column B, indicate to what extent you would like to provide students access to these technologies.

	A Not at all — To a great extent	B Not at all — To a great extent	Comments
1. Traditional Media (Overhead, Slide projector, Camcorder, VCR)	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
2. Microcomputers	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
3. Central "Host" Computers (Campus Mainframe)	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
4. Multimedia Systems (Computer Based)	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
5. CD ROM	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
6 Telecommunications			
a. Television (Broadcast, Satellite, Closed Circuit)	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
b. Audio Teleconferencing	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
c. Video Teleconferencing	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
d. Interactive Instructional Television	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
7. What three main technologies do your students use for course activities. ➾	a.	b.	c.

Part Four: Preservice Technology Curriculum
In column A, indicate to what extent the following technologies are incorporated into your preservice teaching program. In column B, indicate to what extent you would like to see these technologies incorporated into your preservice program.

	A Current Status (Extent of Involvement/Use)	B Ideal Status (Extent would like to use)	A Comments column is provided if further explanation is appropriate.
	Not at all — To a great extent	Not at all — To a great extent	Comments
1. Traditional Media (Overhead, Slide projector, Camcorder, VCR)	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
2. Microcomputers	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
3. Central "Host" Computers (Campus Mainframe)	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
4. Multimedia Systems (Computer Based)	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
5. CD ROM	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
6. Telecommunications			
a. Television (Broadcast, Satellite, Closed Circuit)	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
b. Audio Teleconferencing	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
c. Video Teleconferencing	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
d. Interactive Instructional Television	1 2 3 4 5 6 7	7 6 5 4 3 2 1	
7. What are the three most important technological competencies your institution feels graduates should have to be effective teachers. ⇨	a.	b.	c.

Part 5: Media Course Offering In Education

1. At your institution a separate undergraduate course in "media" is:

_______ offered and required

_______ offered, not required

_______ not offered

a. If a media course is offered, distance education is:

_____ included _______ not included

b. If included, is distance education taught at the:

_____ awareness level _______ experiential level

2. At your institution a separate Master's course in "media" is:

________ offered and required

________ offered, not required

________ not offered

a. If a media course is offered, distance education is:

______ included ________ not included

b. If included, is distance education taught at the:

_______awareness level _________experiential level

Part Six:

1. Does your institution plan to link to the Iowa Communication Network within the next three years?

_________yes ________ no

a. If yes, do you plan to incorporate distance education into your education curriculum?

_________yes ________ no

Comments:

2. Please list any boosters or barriers to the incorporation of distance education into your institution's education curriculum.

Boosters	Barriers

Results of Technology Survey

The preservice component of the Teacher Education Alliance sent a survey to each teacher education program in the state to identify current technology applications and the extent of participation in distance learning. A summary of the findings is presented below.

- Faculty use microcomputers and traditional technologies
- Faculty seldom use telecommunications and interactive television
- Students use the computer most followed by traditional media
- Students use multimedia and interactive television the least
- Most institutions require an undergraduate course in media/technology
- Distance education is included in thoise courses only at the awareness level
- Those with graduate programs in teacher education do not require a media/technology course
- There is a need for training faculty, with in-house and state conferences the preferred type of training
- There is a need for more faculty access to multimedia, interactive television, and computer teleconferencing
- There is a need for more student access to multimedia, CD-ROM, and interactive television
- Integration of technology into the curriculum areas is recommended

Note: Frequency and paired-t analysis were conducted using SPSS

APPENDIX J

Preservice Symposium Survey

NOTES

IOWA DISTANCE EDUCATION ALLIANCE

Preservice Teacher Education Symposium

April 19, 1993

Memorial Union
Iowa State University
Ames, Iowa

SYMPOSIUM OUTLINE

Focus: Distance Education in Teacher Education

Time: 9:00 - 3:00 p.m.

Agenda:

9:00	Coffee & Rolls
9:15 - 9:45	Welcome: Ann Thompson, Sharon Smaldino, Mary Herring
9:45 - 10:30	Ellen Wagner: Distance Education in Teacher Education: The Implications
10:30 - 10:45	Break
10:45 - 11:15	Mike Simonson & Lynn Glass: Star Schools Overview - Teacher Education Alliance
11:15 - 12:45	Panel Discussion of Individual School's Visions for Teacher Education/Distance Education at their schools
12:45 - 1:30	Lunch
1:30 - 2:15	Small Group Discussion: Infusion Issues Barriers & Boosters
2:15 - 2:30	Break
2:30 - 3:00	Summary

FEATURED SPEAKER

Ellen D. Wagner is Associate Professor of Educational Technology with the Division of Research, Evaluation and Development, College of Education, University of Northern Colorado. She is also a Project Director with the Western Interstate Commission of Higher Education.

Her research, writing and teaching features instructional assessment, design and evaluation. For the past eight years, her work has emphasized distance education applications.

She holds a Ph.D. in Educational Psychology from the University of Colorado-Boulder, and earned B.A. and M.S. degrees from the University of Wisconsin-Madison. Before working in higher education she was a media production specialist for the Boulder Valley (Colorado) Public Schools.

She is a past President of the Division for Instructional Devlopment, Association of Educational Communications and Technology, and is current Chair of AECT's Government Relations Committee.

Distance education encompasses a broad array of technology applications for improving access to instructional resources, courses and programs. Dr. Wagner's presentation will focus on distance education in teacher education.

PANEL PRESENTERS

Dr. Norene Daly, Iowa State University: Dean, College of Education
Dr. Thomas Switzer, University of Northern Iowa:
Dean, College of Education
Dr. Steven Yussen, University of Iowa: Dean, College of Education
Dr. Les Huth, Wartburg College: Professor
Dr. Edgar Epperly, Luther College: Professor
Dr. Michael Vavrus, Tri-College Cooperative: Professor
Dr. William Higdon, Graceland College: President

Teacher Education Alliance
Preservice Symposium
Group Discussion Questions

Focus: The first part of today's symposium looked at "visions" of distance education in teacher education. It is time to focus on the actuality of infusing distance education methodology into teacher training programs across Iowa. Specifically, what skills/knowledge must our future teachers have; concentrating on the fundamental issues of teaching at a distance on a fiber optic network.

Please select a group recorder who will be responsible for presenting a short summary at 2:30.

Questions to be addressed.

1. Describe ways you see infusion of distance education into your program.
2. Identify integral distance education issues that should be addressed in teacher education programs.
3. What are your institution's needs related to infusion of distance education methods in your program?
4. What do you see as barriers and boosters to infusing distance education into your teacher education program?

Summary

1. List three key distance education components that are essential for future teachers to learn.
2. List two main barriers and two main boosters to infusion of these key concepts.

Teacher education Alliance
Preservice Symposium
April 19, 1993

List of Attendees

Name	Institution
Frank Affannoto	Buena Vista College
Diane Alt	Central College
William Callahan	University of Northern Iowa
Norene Daly	Iowa State University
Darrell Druvenga	Central College
Edward Ducharme	Drake University
Mary Ducharme	Drake University
John Dunkhase	University of Iowa
Edgar Epperly	Luther College
Dave Fritz	Upper Iowa University
Jack Gittinger	Graceland College
Lynn Glass	Iowa State University
Dave Hansen	University of Iowa
William Higdon	Graceland college
George Houghton	Faith Baptist Bible College
Les Huth	Wartburg College
Anton Netusil	Iowa State University
Sr. Michele Schiffgens	Teikyo Marycrest University
John Schreiber	Teikyo Westmar University
Mike Simonson	Iowa State University
Sharon Smaldino	University of Norhtern Iowa
Les Sternberg	Iowa state University
Karen Stinson	Upper Iowa university
Joan Tephly	Teikyo Marycrest University
Ann Thompson	Iowa State University
Michael Vavrus	Tri-College
William Waack	University of Northern Iowa
Steve Yussen	University of Iowa

EVALUATION

Iowa Distance Education Alliance
Preservice Symposium

Please darken the appropriate circle with a #2 pencil. Use the following scale:

1= Poor *2=Below Average* *3=Average* *4=Above Average* *5=Excellent*

Please rate the following symposium components:

1. Clarity of objectives.
2. Effective use of time.
3. Opportunity for participant feedback.
4. Immediate applicability of information.
5. Long term applicability of information.
6. Organization of symposium (e.g. schedule, meals, facilities).
7. Overall program content.
8. Quality of information provided by the keynote speaker.
9. Quality of information provided in the overview of Star Schools.
10. Quality of information provided in the panel discussion.
11. Quality of information from the small group discussion.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER

Indicate which components of the symposium were most useful to you and explain why.

Provide suggestions for improving the symposium in areas you rated poor to average.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Evaluation

Symposium Components	5 - Excellent	4 - Above average	3 -Average	2 - Below Average	1 - Poor	Number of Responses	Mean	S.D.
Clarity of objectives	15%	31%	54%	0%	0%	13	3.62	0.77
Effective use of time	31%	39%	31%	0%	0%	13	4.00	0.82
Opportunity for participant feedback	46%	46%	0%	8%	0%	13	4.31	0.86
Immediate applicability of information	0%	23%	46%	31%	0%	13	3.92	0.76
Long term applicability of information	31%	69%	0%	0%	0%	13	4.31	0.48
Organization of the symposium	71%	14%	7%	0%	7%	13	4.36	1.39
Overall program content	39%	39%	23%	0%	0%	13	4.15	0.80
Information provided by keynote speaker	21%	29%	50%	0%	0%	14	3.71	0.83
Information provided by Star Schools overview	15%	54%	31%	0%	0%	13	3.85	0.69
Information provided by panel discussion	15%	62%	23%	0%	0%	13	3.92	0.64
Information from small group discussion	33%	42%	25%	0%	0%	12	4.08	0.79

Preservice Symposium
Evaluation Comments

Indicate which components of the symposium were most useful to you and explain why.

1. The keynote speaker had a broad focus which is critical. The background information on Star schools and the discussion following the panel and during lunch were also useful.
2. The panel discussion was useful. Many views with varied philosophical backgrounds were presented. The small group discussion was useful for the same reason.
3. I enjoyed the "vision" session where members shared what they envisioned for the network. The video of applications in New York, Maine, and North Carolina was also interesting.
4. The small group discussion and the panel were the most useful.
5. The overview was the most useful.
7. I was only vaguely aware of the Star Schools Project and the fiber optic effort so I gained more than some participants. The overview I gained was most valuable and I find myself linking the fiber optic network to other professional activities.
8. I found the information on the Star Schools system most useful because I needed more familiarity. The discussion among the small groups also provided an opportunity to assess the present status.
9. The most useful component for me was the keynote speaker. She said it - did the audience listen!

Provide suggestions for improving the symposium in areas you rated poor to average.

1. Provide clarification of the specific goals and their effect on the system and what are the goals for 2 - 5 years from now. Give more specific application of programs or courses and provide information on plans to establish control over the delivery system.
2. The symposium needs to be longer. There needs to be better organization of those doing the discussions.
3. For whatever reasons, there didn't seem to be much interaction among the participants. The panelists and speakers seemed to dominate the discussion.
4. The keynote did not give key information. Anyone could have presented her information. Provide more time to interact and network.
5. Clarity of goals received an average rating. Provide a better statement of the objective, what we'll be doing at the seminar.
6. Immediate applicability of the information is rated low because we need to have the hardware in order to see the applications that are possible.
7. Better effort to relate more to the overall goals of technology and the preparation of future educators is needed.

APPENDIX K

Preservice Workshop Survey

TEACHER EDUCATION ALLIANCE
PRESERVICE TEACHER EDUCATION WORKSHOP
February 3-4, 1994

Please complete this form at the last session you attend (among those listed below) and return it to the session moderator or mail the completed form to RISE, E005 Lagomarcino Hall, Iowa State University, Ames, Iowa 50011.

Your opinions are important. We would like you to ***rate the quality*** *of the sessions you attended. In the blank next to the session title, please provide a numeric rating using the scale below.* ***Rate only those sessions that you attended.***

1=very poor 2=poor 3=mediocre 4=good 5=very good 6=excellent

Session Title	Rating of Quality
Thursday, February 3	
Interactive Television Resource Guidebook Workshop	______________
Visual Presentations with Pizzazz	______________
Ready or not: Preparing Tomorrow's Teachers for Distance Education	______________
Friday, February 4	
The Logistics of Making Teacher Education Connections	______________
Enriching the Curriculum Through Telecommunications	______________
Panel: Distance Education and the K-12 Curriculum	______________

Describe what you found most useful about this workshop and why.

Suggestions for improvement or topics you would like to see addressed in the future.

Results of Preservice Workshop Evaluation Surveys
Workshop held at Drake University
February 3-4, 1994

The preservice component of the Teacher Education Alliance held a workshop in February. Invitations were sent to all teacher education institutions in the state. Participants were asked to rate each of the six sessions conducted as part of the workshop. Ratings were on a six point scale: 1=very poor, 2=poor, 3=mediocre, 4=good, 5=very good, 6=excellent. Eleven surveys were returned. Average ratings for each session are listed below.

Interactive Television Guidebook	4.73
Visual Presentations with Pizzazz	5.00
Preparing Tomorrow's Teachers for Distance Education	4.22
The Logistics of Making Teacher Education Connections	4.00
Enriching the Curriculum through Telecommunications	4.33
Distance Education and the K-12 Curriculum	5.00

Participants were also asked to indicate what was most useful about the workshop and suggestions for improvement. Responses are categorized below.

Most Useful	**Number of times mentioned**
Increased awareness and provided examples	6
Demonstration of the technology	5
Guidebook	1
Question and answer session	1
Sharing with other teacher educators	1

Suggestions for Improvement	**Number of times mentioned**
Better stage setting	2
Fewer talking heads	2
More interaction provided	1
More student participation	1
Address fears of educators	1
Deliver over the ICN	1
Show how technologies fit together	1

APPENDIX L

Preservice Telephone Follow-Up Survey

Star Schools Preservice Telephone Follow-up

Script

This is ____________ from Iowa State University. Iowa State University is conducting an evaluation of the Iowa Distance Education Alliance, Iowa's Star School's Project. As part of that evaluation we are collecting information from the teacher education institutions in the state. You have been identified as the contact person for your institution. Would you be willing to spend approximately five to ten minutes of your time to respond to a few brief questions concerning your perceptions about the role of distance education in your teacher preparation program and any involvement you have had in Star Schools activities?

If No:

Would there be a better time for me to call back with these questions?
Contact:___________________________ Phone:_________________________
Date/Time:________________________

Thank you for your time.

If Yes:

I would like to ask you several open-ended questions

1. As part of the Star Schools Project, a series of activities have been held for representatives from teacher preparation programs including symposia, colloquia, workshops, and a conference. Describe your institution's participation in any of these activities.

2. As part of the Star Schools Project, your institution has received copies of the DiLite Illuminator newsletter. Please describe how your institution has used the information contained in these newsletters.

3. As part of the Star Schools Project, your institution received a copy of an Interactive Television Resource Guidebook to be used in incorporating distance education into the teacher education curriculum. How has your institution used the Guidebook?

4. How is distance education currently integrated into your curriculum for preservice teachers and describe any future plans for involving students in distance education.

5. Describe the current level of faculty involvement with distance education at your institution and any future plans for involving faculty in distance education.

6. Describe the current level of administrative uses of distance education at your institution and any future plans to use distance education administratively.

7. List the top three issues related to the future of distance education in Iowa's preservice teacher education programs.

8. What groups or organizations do you feel should be taking a leadership role in the use of distance education in preservice teacher education.

9. On a scale of 1 to 10 with one indicating not at all important and 10 indicating extremely important, how would you rate the importance of using distance education to expand or enhance teacher education programs.

10. Is your institution currently connected to the Iowa Communications Network (ICN), and if not, when do you plan to connect.

11. Is there someone else at your institution to whom we should talk?

12. Are there any other comments you would like to make?

Thank you for taking the time to answer these questions. If you have further information you feel we should be aware of, please call our office at 515-294-7009 and ask for __________.

Preservice Survey Summary
September, 1994

(Some questions may contain multiple responses from an institution)

Questions and Response Categories	Number of Institutions
Level of participation in IDEA preservice activities	
Attended some events	15
Attended something, but not sure what (7)	
ISU Symposium (5)	
Drake Conference (4)	
ICN meetings (2)	
Guidebook meetings (2)	
Mini-grant activity (1)	
Did not participate	7
Use of the preservice newsletter	
Circulated among department faculty	9
Do not remember seeing it	6
Department chair reads it	5
Given to others on campus (media center, computer center)	2
Shown to students	2
Used in educational technology and methods courses	1
Use of the preservice guidebook	
Do not know/do not remember seeing it	7
Using components from the guidebook in classes	4
Given to the media/technology person	3
One faculty member has it	3
Shared with committee for future planning	2
Shared with methods teacher	1
Shared with academic affairs committee	1
Shared with administrators	1
Showed video to classes	1
Circulated to department faculty	1
Used for information	1
Level of incorporation of distance education in the teacher education curriculum	
Theoretical introduction/awareness level	11
Not incorporated in the curriculum	8
Students shown equipment	4
ICN used in media technology class	4
Guidebook video tape used	1
One class taught over ICN	1
Future plans to incorporate distance education into the teacher education curriculum	
No plans to incorporate in the future	6
Building an ICN classroom	5
Plan to demonstrate the ICN to students	4
Plans are under development	3
Integrated into seminar course	3
Plan to expand future use	2
Using distance technology for teacher-student observations	2
Not convinced of the need to do anything	2
Will simulate distance classes	1

Questions and Response Categories	Number of Institutions
Faculty involvement in distance education activities	
No faculty involvement	5
ICN demonstrated to faculty/workshop held	4
Have downlinked satellite programs	4
Some faculty know a little bit about distance education	4
Some faculty involved in ICN activities	3
Offering courses using distance education	3
Using Internet	1
Some distance education activity on campus	1
Future plans to involve faculty in distance education activities	
No plans to increase level of faculty involvement	8
Plan to integrate distance education into courses	3
Plan to involve faculty in the future	2
Plan to have distance education workshop	1
Plan to connect to other colleges	1
Plan to get a Part III grant for an ICN room	1
Administrative use of distance education	
Do not know	11
Administration working on plans	6
Use for meetings and teleconferences	4
Have asked for a classroom	2
Use Internet	2
Not using it	2
Use for data traffic	1
Top issues in integrating distance education into teacher education	
Faculty involvement and training	18
Access to an ICN classroom	14
Money/cost	9
Questioning relevance to the curriculum	5
Scheduling and coordination	4
Institutional competition	4
Maintaining quality	3
Staffing issues	2
Curriculum issues	2
Resource access	1
Planning	1
How to connect to K-12 schools	1
Do not know	1
Who should take a leadership role in integrating distance education into teacher education	
Iowa Association of Colleges of Teacher Education (IACTE)	10
Iowa Department of Education	9
Professional organizations (ICTM, ISTA, ASCD, media group, etc.)	9
Teacher education departments	5
A newly formed task force	3
School districts	2
AEAs	2
Regent institutions	2
NCATE	1
Presidents of colleges	1
Do Not know	1

Questions and Response Categories	Number of Institutions
Ratings of the importance of incorporating distance education into teacher preparation programs *(1=not at all important and 10=extremely important)*	
Two	1
Three	2
Five	1
Six	5
Seven	8
Eight	2
Nine	1
Ten	2
Plans to connect to the ICN	
Already connected	3
Plan to connect in next year	6
Plan to connect in next five years	3
Plan to connect, but do not know when	6
No plans to connect	4

APPENDIX M

Curriculum Institutes Overall Information

Iowa Distance Education Alliance
Curriculum Institute Participant Information

Name:

Work Position:

Home Address:

Work Address:

Home Telephone:

Work Telephone:

Social Security Number:

AEA Number:

Male _____ Female _____

Caucasian _____ Black _____ Hispanic _____
Asian/Pacific Islander _____ Native American _____

Years as an educator:

Highest Degree Held:

Level of Teaching: Elementary _____ Middle _____ Secondary _____ Post-Secondary _____

Subject Area: Mathematics _____ Science _____ Foreign Language _____
Literacy _____ Vocational Education _____ Other _____

Institute Currently Attending

Mathematics _____ Science _____ Literacy _____
Foreign Language _____ Vocational Education _____

Are you taking this institute for graduate credit? Yes _____ No _____

If yes, from which Institution? U of I _____ UNI _____ ISU _____

Are you taking this institute for Continuing Education Credit? Yes _____ No _____

Other Teacher Education Alliance Activities you have participated in.

Interactive Television Workshop _____ Other Curriculum Institute (specify)_______________

Interactive Television Teaching Experience

Have you ever taught over an interactive television system? Yes _____ No _____

If yes, name the institution and state in which the system was located._______________

With what grade level of student did you work? _______________

How many years have you taught over an interactive television system? _________

Interactive Television Training

Have you ever participated in interactive television training? Yes _____ No _____

Where? _______________________________________

How many hours of training did you receive? ___________

Iowa Distance Education Alliance Curriculum Institute Participant Information
1994

Please check which of the following curriculum institute activities you will be attending:

Mathematics sessions (February 19, March 19, April 23) ____
Literacy session (June 22-24) ____
Foreign Language session (June 27-July 1) ____
Vocational Education session (July 13-15) ____
Science session (March 5, April 16, April 30) ____
General session for all institute participants (June 13-14) ____

Name: ______________________________
(Last) *(First)*
Preferred name:

Work title:

Home Address:

Work Address:

(Please circle your preferred mailing address)

Home Telephone:

Work Telephone:

Social Security Number:

AEA Number:

Male ____ **Female** ____

Caucasian ____ **Black** ____ **Hispanic** ____
Asian/Pacific Islander ____ **Native American** ____

Years as an educator:

Highest Degree Held:
Degree is in:

Level of Teaching: Elementary ____ Middle ____ Secondary ____ Post-Secondary ____

Subject Area:
Mathematics List subjects taught____________________
Science List subjects taught____________________
Literacy List subjects taught____________________
Vocational List vocational areas taught____________________
Foreign Language List languages taught and at what grade level ________
____

Have you attended one of the three-day workshops on distance education offered through the Star Schools Project? (Bob Hardman's workshops) Yes ____ No ____
If yes, date attended______________

Did you attend one of the Star Schools Project Curriculum Institutes last summer (1993)? Yes ____ No ____
If yes, which institute did you attend? ______________________________

Have you ever taught over an interactive television system? Yes ____ No ____
If yes, location(s) ______________________________ date(s)______________

Are you taking this institute for graduate credit? Yes ____ No ____
If yes, from which Institution? U of I ____ UNI ____ ISU ____

Please share your reason for wanting to participate in a 1994 curriculum institute.

On the back of this page, please tell us anything else you'd like us to know about you prior to the institute.

Participant Information from 1993 and 1994 Institutes
Total Number of Participants = 555

Variable	Number	Percent
Sex		
Male	227	41%
Female	328	59%
Race		
Caucasian	527	95%
Minority (Hispanic, Black and Native American)	7	1%
No Response	21	4%
Occupation		
Teacher	512	92%
Other	30	5%
No Response	13	2%
Educational Degree Held		
Bachelors	321	58%
Masters	195	35%
Doctorate/Education Specialist	6	1%
No Response	33	6%
Teaching Level		
Elementary	88	16%
Middle/Junior High	67	12%
High School	292	53%
Elementary and Middle	10	2%
Junior High and High School	51	9%
K-12	9	2%
Postsecondary	4	1%
Postsecondary and High School	19	3%
No Response	15	3%
Subject Area		
All Elementary Subjects*	8	1%
Mathematics	110	20%
Science	113	20%
Foreign Language	63	11%
Literacy	76	14%
Vocational Education	80	14%
Mathematics and Science	73	13%
Foreign Language and Literacy	2	<1%
Other	14	3%
No Response	16	3%
Number of years as an educator		
Under 10 years	173	31%
11-20 years	160	29%
21-30 years	158	29%
Over 30 years	30	5%
No Response	34	6%
Year of institute attended		
First year institue	232	42%
Second year institute	323	58%
Taking the institute for graduate credit	164	32%
Previously taught over an interactive system	33	6%

---

*Year one participants are not included in this group. They are included according to which institute they attended.

Curriculum Institutes

Average Evaluation Ratings Across All Institutes

Institute Components	Mathematics		Science		Foreign Language		Literacy		Vocational Education*		General**
	1993	1994	1993	1994	1993	1994	1993	1994	1993	1994	1994
Registration process	NA	3.21	NA	3.47	NA	3.41	NA	3.98	NA	3.47	3.33
Information received prior to the institute	NA	2.69	NA	2.92	NA	2.72	NA	3.55	NA	3.36	3.00
Clarity of objectives	3.10	2.64	3.60	2.77	3.45	3.62	4.25	4.23	4.04	3.45	2.80
Effective use of time	3.27	2.46	3.38	2.82	3.56	3.66	4.11	4.18	3.80	3.25	2.73
Opportunity for participant interaction	4.43	3.39	3.95	3.74	4.16	3.97	4.57	4.48	4.52	4.06	2.98
Quality of materials used during the institute	NA	3.25	NA	3.39	NA	4.14	NA	4.45	NA	4.30	3.14
Quality of the speakers	NA	3.15	NA	3.45	NA	4.48	NA	4.43	NA	3.53	3.01
Applicability of information	3.80	2.99	3.75	3.42	4.06	4.35	4.18	4.25	4.10	4.00	3.02
Organization of the institute	3.67	2.88	3.80	3.16	3.88	3.83	4.43	4.55	4.12	3.49	3.01
Overall satisfaction with the institute	**3.61**	**2.91**	**3.75**	**3.16**	**3.97**	**4.10**	**4.57**	**4.55**	**4.33**	**3.66**	**3.02**

*Means affected by significantly lower ratings for one of the three sites (see vocational report).

** A general curriculum institute was held only in 1994.

NA=Not Applicable, question not asked in 1993.

Scale: 1=poor 2=below average 3=average 4=above average 5=excellent

Curriculum Institutes

Comparison of Pre and Post Assessment Results

Ratings	Mathematics		Science		Foreign Language		Literacy		Vocational Education	
	1993	1994	1993	1994	1993	1994	1993	1994	1993	1994
Pre-Assessment										
Lowest score	2.24	1.72	1.91	1.70	1.18	1.25	1.73	1.27	1.65	1.82
Highest score	3.55	3.61	3.19	3.05	3.97	3.11	4.00	3.16	3.31	3.22
Post-Assessment										
Lowest score	2.65	3.03	2.88	2.75	2.50	1.89	3.82	3.44	3.92	2.98
Highest score	4.13	4.05	3.88	3.79	4.22	3.89	4.54	4.05	4.40	3.91

Curriculum Institutes

Top three responses to open ended questions across all institutes

Topic of Comment	
Which components were most useful to you	
1993	*1994*
1. Learning about/using the ICN	1. Learning about/using the ICN
2. Teaching examples	2. Interacting/sharing with other teachers
3. Interacting/sharing with other teachers	3. Quality of speakers
Provide suggestions for improving the institute	
1993	*1994*
1. Better information prior to the institute	1. More hands-on/practice time
1. More hands-on/practice time	2. More interaction/sharing time
2. More interaction/sharing time	3. Shorter institute
3. More teaching examples	3. Better information prior to the institute

APPENDIX N

Mathematics Institutes

PRE-ASSESSMENT

Iowa Distance Education Alliance
Mathematics Institute

Please write the last four digits of your social security number. ______________

Darken the appropriate circle with a #2 pencil.

1. Is there a distance education classroom using interactive television in your school?
   1=yes *2=no* *3=don't know*

2. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

3. Indicate your level of experience with distance learning using interactive television..
   1=no experience *2=very little* *3=some* *4=quite a bit* *5=extensive*

Use the following scale to indicate your level of knowledge about items 4 through 20.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

4. NCTM Curriculum and Evaluation Standards for your grade level.
5. NCTM Curriculum and Evaluation Standards for other grade levels.
6. In particular, the statistics and probability standards.
7. The Iowa Star Schools Project.
8. Collecting, organizing, and describing data.
9. Constructing, reading, and interpreting displays of data.
10. Formulating and solving problems that involve collecting and analyzing data.
11. Assessing statistical understanding.
12. Educational statistical software.
13. Graphing calculators.
14. Posing questions and tasks that elicit, engage, and challenge students' thinking.
15. Equity issues in mathematics education.
16. Pedagogy issues in mathematics education.
17. Use of reasoning and problem solving in mathematics instruction.
18. Successful teaching strategies used with interactive television.
19. Adapting lessons to use over an interactive system.
20. The rationale for using interactive technology to reach the distant learner.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER---------------->

NCS Trans-Optic® M10-6659 2019 A2804-8

For questions 21 through 24, use the scale below to rate your ability to do the following .

1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

21. Infuse NCTM Standards into the curriculum.
22. Incorporate new mathematics methods in a plan for distance learning.
23. Demonstrate effective assessment measures.
24. Operate the equipment used in a distance classroom.

Please darken the appropriate circle.

25. Have you attended one of the regional Interactive Television workshops presented by the Teacher Education Alliance?
    1=yes *2=no*
26. If no, are you scheduled to attend one?
    1=yes *2=no*

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Describe the techniques you use in the classroom to assess your students.

Describe the specific techniques and strategies you use in the classroom to develop student understanding and participation.

POST-ASSESSMENT

Iowa Distance Education Alliance
Mathematics Institute

Please write the last four digits of your social security number. ______________

Darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2 through 18.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. NCTM Curriculum and Evaluation Standards for your grade level.
3. NCTM Curriculum and Evaluation Standards for other grade levels.
4. In particular, the statistics and probability standards.
5. The Iowa Star Schools Project.
6. Collecting, organizing, and describing data.
7. Constructing, reading, and interpreting displays of data.
8. Formulating and solving problems that involve collecting and analyzing data.
9. Assessing statistical understanding.
10. Educational statistical software.
11. Graphing calculators.
12. Posing questions and tasks that elicit, engage, and challenge students' thinking.
13. Equity issues in mathematics education.
14. Pedagogy issues in mathematics education.
15. Use of reasoning and problem solving in mathematics instruction.
16. Successful teaching strategies used with interactive television.
17. Adapting lessons to use over an interactive system.
18. The rationale for using interactive technology to reach the distant learner.

For questions 19 through 22, use the scale below to rate your ability to do the following.
1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

19. Infuse NCTM Standards into the curriculum.
20. Incorporate new mathematics methods in a plan for distance learning.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER →

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

21. Demonstrate effective assessment measures.

22. Operate the equipment used in a distance classroom.

EVALUATION

Iowa Distance Education Alliance
Mathematics Institute

Please darken the appropriate circle with a #2 pencil. Use the following scale:

1= Poor *2=Below Average* *3=Average* *4=Above Average* *5=Excellent*

Please rate the following components:

1. Clarity of institute objectives.
2. Effective use of time.
3. Opportunity for participant interaction.
4. Applicability of information.
5. Organization of the institute.
6. Information about NCTM Curriculum and Evaluation Standards.
7. Information about exploring and making sense of data.
8. Information about using interactive television in mathematics instruction.
9. Information about the use of computer technologies in instruction.
10. Information about equity issues in mathematics.
11. Information about assessment strategies.
12. Information about successful mathematics pedagogy.
13. Information about reasoning and problem solving.
14. Overall rating for the institute.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER-------------->

NCS Trans-Optic® M10-8659 2019 A2804-8

Indicate which components of the institute were most useful to you and explain why.

A B C D E F G H I J
21 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
22 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
23 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
24 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
25 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
26 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
27 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
28 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
29 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
30 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
31 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
32 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
33 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
34 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
35 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
36 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
37 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
38 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
39 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
40 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪

Provide suggestions for improving the institute in areas you rated poor to average.

PRE-ASSESSMENT

Iowa Distance Education Alliance
1994 Mathematics Institute

Please write the last four digits of your social security number. ______________

Darken the appropriate circle with a #2 pencil.

1. Is there a distance education classroom using interactive television in your school?
1=yes *2=no* *3=don't know*

2. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

3. Indicate your level of experience with distance learning using interactive television.
1=no experience *2=very little* *3=some* *4=quite a bit* *5=extensive*

Use the following scale to indicate your level of knowledge about items 4 through 16.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

4. NCTM Curriculum and Evaluation Standards for your grade level.
5. NCTM Curriculum and Evaluation Standards for other grade levels.
6. NCTM discrete mathematics standards.
7. NCTM patterns standards.
8. The Iowa Star Schools Project.
9. Representing problem situations using recurrence relations.
10. Representing problem situations using sequences.
11. Representing problem situations using finite graphs.
12. Use of connections among mathematical topics.
13. Posing questions and tasks that elicit, engage, and challenge students' thinking.
14. Issues related to mathematics instruction in an interactive television environment.
15. Mathematical pedagogy for student-centered classrooms.
16. Successful teaching strategies used with interactive television.

For questions 17 through 20, use the scale below to rate your ability to do the following.
1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

17. Infuse NCTM Standards into the curriculum.
18. Incorporate new mathematics methods in a plan for distance learning.
19. Adapt lessons to use over an interactive system.
20. Operate the equipment used in a distance classroom.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Describe techniques you use in the classroom to assess your students.

A B C D E F G H I J
21 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
22 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
23 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
24 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
25 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
26 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
27 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
28 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
29 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
30 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
31 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
32 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
33 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
34 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
35 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
36 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
37 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
38 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
39 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
40 ①②③④⑤⑥⑦⑧⑨⓪

Describe specific techniques and strategies you use in the classroom to develop student understanding and participation.

POST-ASSESSMENT

Iowa Distance Education Alliance
1994 Mathematics Institute

Please write the last four digits of your social security number. ______________

Darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2through 14.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. NCTM Curriculum and Evaluation Standards for your grade level.
3. NCTM Curriculum and Evaluation Standards for other grade levels.
4. NCTM discrete mathematics standards.
5. NCTM patterns standards.
6. The Iowa Star Schools Project.
7. Representing problem situations using recurrence relations.
8. Representing problem situations using sequences.
9. Representing problem situations using finite graphs.
10. Use of connections among mathematical topics.
11. Posing questions and tasks that elicit, engage, and challenge students' thinking.
12. Issues related to mathematics instruction in an interactive television environment.
13. Mathematical pedagogy for student-centered classrooms.
14. Successful teaching strategies used with interactive television.

Use the following scale to rate your ability to do the following .

1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

15. Infuse NCTM Standards into the curriculum.
16. Incorporate new mathematics methods in a plan for distance learning.
17. Adapt lessons to use over an interactive system.
18. Operate the equipment used in a distance classroom.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

EVALUATION

Iowa Distance Education Alliance
1994 Mathematics Institute

Please darken the appropriate circle with a #2 pencil. Use the following scale to rate items 1 through 15:

1= Poor *2=Below Average* *3=Average* *4=Above Average* *5=Excellent*

1. Institute registration process.
2. Usefulness of information received prior to the institute.
3. Clarity of institute objectives.
4. Effective use of time.
5. Opportunity for participant interaction.
6. Applicability of information.
7. Quality of institute speakers.
8. Organization of the institute.
9. Quality of materials used during the institute.
10. Usefulness of teacher sharing experience.
11. Information about NCTM Curriculum and Evaluation Standards.
12. Information about topics in discrete mathematics.
13. Information about using interactive television in mathematics instruction.
14. Information about assessment strategies.
15. Overall rating for the institute.

Please rate items 16 through 20 using the following scale:

1=Very Unstatisfactory *3=Satisfactory* *5=Not Applicable*
2=Unsatisfactory *4=Very Satisfactory*

16. February 19 session originating from the University of Iowa.
17. March 19 session originating from Storm Lake.
18. April 23 session originating from Hampton.
19 Use of the ICN to deliver the institute.
20. Conducting the institute on three seperate days rather than three consecutive days.

OVER-------------->

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

NCS Trans-Optic® M10-6659 2019 A2804-8

Indicate which components of the institute were most useful to you and explain why.

Provide suggestions for improving the institute.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Participant Information from 1993 Mathematics Institute
Total Number of Participants = 75

Variable	Number	Percent
Sex		
Male	37	49%
Female	38	51%
Race		
Caucasian	72	96%
Unknown	2	4%
Occupation		
Teacher	73	97%
Other	2	3%
Educational Degree Held		
Bachelors	38	51%
Masters	36	49%
Other	1	1%
Teaching Level		
Elementary	12	16%
Middle/Junior High	7	9%
High School	44	59%
Elementary and Middle School	2	3%
Junior High and High School	3	4%
K-12	1	1%
Postsecondary	6	8%
Subject Area		
Mathematics	56	79%
Math and Science	7	10%
Science	1	1%
Other	7	10%
Have a distance education classroom in their school		
Yes	25	34%
No	44	60%
Don't Know	4	6%
Taking the institute for graduate credit	24	32%
Taking the institute for Continuing Education Credit	10	13%
Attended an Interactive Television Workshop	19	25%
Scheduled to attend a Workshop	16	21%
Previously taught on interactive television	3	4%
Previous training to teach on interactive television	19	25%

AEA/Community College Region

I	6	8%
II	4	5%
III	2	3%
IV	3	4%
V	9	12%
VI	1	1%
VII	3	4%
IX	1	1%
X	7	9%
XI	19	25%
XII	4	5%
XIII	2	3%
XIV	5	7%
XV	5	7%
XVI	4	5%

Average number of years as an educator *18 years*

Indicate your level of experience with distance learning using interactive television.

	Number	Percent
None	49	67%
Very little	16	22%
Some	8	11%
Quite a bit	0	0%
Extensive	0	0%

Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

Pretest			Posttest	
N	%		N	%
0	0%	Much more effective	2	3%
7	10%	More effective	15	22%
36	50%	About the same	43	62%
29	40%	Less effective	8	12%
0	0%	Much less effective	0	0%

1993 MATH INSTITUTE

Pre-Assessment

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
NCTM Curriculum and Evaluation Standards for your grade level.	4%	23%	60%	8%	3%	73	3.23	0.87
NCTM Curriculum and Evaluation Standards for other grade levels.	1%	8%	50%	34%	7%	74	2.64	0.79
In particular, the statistics and probability standards.	3%	12%	43%	31%	10%	74	2.73	1.04
The Iowa Star Schools Project.	0%	8%	35%	38%	19%	74	2.32	0.88
Collecting, organizing, and describing data.	4%	23%	47%	24%	0%	74	3.14	0.98
Constructing, reading, and interpreting displays of data.	4%	24%	55%	15%	0%	74	3.26	0.99
Formulating and solving problems that involve collecting and analyzing data.	3%	15%	61%	20%	0%	74	3.05	0.83
Assessing statistical understanding.	3%	12%	47%	35%	1%	74	2.84	0.86
Educational statistical software.	0%	4%	37%	39%	20%	74	2.24	0.82
Graphing calculators.	7%	19%	35%	20%	18%	74	2.84	1.30
Posing questions and tasks that elicit, engage, and challenge thinkin	4%	34%	51%	8%	1%	74	3.37	0.85
Equity issues in mathematics education.	4%	26%	45%	20%	4%	74	3.12	1.06

Pre-Assessment (PART 2)

Rate ability	5=very adequate	4=adequate	3=unsure	2=inadequate	1=very inadequate	Number of Responses	Mean	S.D.
Infuse NCTM Standards into the curriculum.	12%	51%	23%	7%	7%	74	3.55	1.02
Incorporate new mathematics methods in a distance learning plan.	3%	18%	38%	22%	20%	74	2.61	1.08
Demonstrate effective assessment measures.	4%	30%	54%	7%	5%	74	3.20	0.84
Operate the equipment used in a distance classroom.	4%	19%	34%	4%	39%	74	2.45	1.29

1993 MATH INSTITUTE

Post-Assessment

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
NCTM Curriculum and Evaluation Standards for your grade level.	10%	57%	29%	4%	0%	69	3.73	0.71
NCTM Curriculum and Evaluation Standards for other grade levels.	0%	30%	58%	10%	0%	69	3.26	0.76
In particular, the statistics and probability standards.	16%	58%	23%	1%	0%	69	3.93	0.71
The Iowa Star Schools Project.	20%	59%	17%	1%	0%	69	4.04	0.76
Collecting, organizing, and describing data.	23%	61%	15%	0%	0%	69	4.13	0.71
Constructing, reading, and interpreting displays of data.	23%	58%	17%	0%	0%	69	4.09	0.68
Formulating and solving problems that involve collecting and analyzing data.	16%	55%	26%	1%	0%	69	3.90	0.73
Assessing statistical understanding.	6%	49%	36%	7%	0%	69	3.58	0.78
Educational statistical software.	0%	12%	51%	36%	1%	69	2.73	0.68
Graphing calculators.	15%	46%	28%	9%	1%	69	3.68	0.93
Posing questions and tasks that elicit, engage, and challenge thinkin	10%	63%	25%	0%	0%	68	3.88	0.64
Equity issues in mathematics education.	12%	57%	29%	0%	1%	69	3.86	0.94

1993 Math Institute

Post-Assessment (PART 2)

Rate ability	5=very adequate	4=adequate	3=unsure	2=inadequate	1=very inadequate	Number of Responses	Mean	S.D.
Infuse NCTM Standards into the curriculum.	13%	68%	17%	0%	0%	69	3.99	0.61
Incorporate new mathematics methods in a distance learning plan.	6%	55%	29%	9%	0%	69	3.62	0.79
Demonstrate effective assessment measures.	9%	51%	38%	3%	0%	69	3.65	0.68
Operate the equipment used in a distance classroom.	0%	23%	35%	26%	16%	69	2.65	1.01

Evaluation

Institute Components	*5 - Excellent*	*4 - Above average*	*3 -Average*	*2 - Below Average*	*1 - Poor*	*Number of Responses*	*Mean*	*S.D.*
Clarity of institute objectives.	9%	28%	36%	18%	9%	67	3.10	1.09
Effective use of time.	10%	28%	45%	10%	6%	67	3.27	0.99
Opportunity for participant interaction.	52%	39%	9%	0%	0%	67	4.43	0.66
Applicability of information.	17%	52%	27%	5%	0%	66	3.80	0.77
Organization of the institute.	21%	42%	22%	13%	2%	67	3.67	1.01
Information about NCTM Curriculum and Evaluation Standards.	30%	47%	23%	0%	0%	66	4.08	0.73
Information about exploring and making sense of data.	40%	48%	12%	0%	0%	67	4.28	0.67
Information about using interactive television in math instruction.	3%	27%	45%	22%	3%	67	3.05	0.86
Information about the use of computer technologies in instruction.	3%	12%	57%	21%	8%	67	2.82	0.85
Information about equity issues in math.	9%	36%	52%	2%	2%	66	3.50	0.75
Information about assessment strategies.	6%	42%	42%	9%	2%	67	3.42	0.80
Information about successful math pedagogy.	2%	36%	55%	6%	2%	67	3.30	0.68
Information about reasoning and problem solving.	9%	47%	39%	3%	2%	66	3.59	0.76
Overall rating for the institute.	12%	46%	33%	9%	0%	67	3.61	0.82

Summary of Comments from 1993 Mathematics Institute Evaluation

Topic of Comment	N
Which components were most useful to you	
Data analysis presentations	11
Presentation of lessons	8
Sharing with other teachers	6
NCTM standards information	6
System hands-on learning	5
Basics of distance education	4
Statistical instruction	4
Videos	4
Demonstrations	4
Ideas to take to the classroom	4
Group sessions	3
Good speakers/presenters	2
Q & A session at Kirkwood	2
Understanding project goals	2
Learning graphing calculators	2
New teaching methods	2
TI-81 demonstration	2
Topics for high school	1
Discussion of mock linkup	1
Everything	1
Provide suggestions for improving the institute	
More hands-on experience	12
Clearer objectives	11
Divide groups by teaching level	5
Link should have been on fiber optics	4
More time to cover all areas	3
Better use of time	3
More pre-workshop information	2
Start on time	1
Equal pay across AEA's	1
Spend less time on lessons	2
More standards work	1
Group discussions/interactions	2
Smaller groups	1
Avoid over-simplification	1
More demonstrations	1
More calculator sessions	1
More on distance learning	1

Table includes multiple responses from 51 of 75 participants

Participant Information from 1994 Mathematics Institute
Total Number of Participants = 88

Variable	Number	Percent
Sex		
Male	31	35%
Female	57	65%
Race		
Caucasian	84	96%
No Response	4	5%
Occupation		
Teacher	85	97%
AEA Consultant	1	1%
Other	1	1%
No Response	1	1%
Educational Degree Held		
Bachelors	52	59%
Masters	31	35%
Doctorate	1	1%
No Response	4	5%
Teaching Level		
Elementary	33	38%
Middle/Junior High	10	11%
High School	31	35%
Elementary and Middle	3	3%
Junior High and High School	6	7%
Postsecondary and High School	5	6%
Subject Area		
Mathematics	51	58%
Mathematics and Science	36	41%
Science	1	1%
Have a distance education classroom in their school		
Yes	16	18%
No	42	48%
Don't Know	5	6%
No Response	25	28%
Average number of years as an educator	*18 years*	*Range 1 to 34 years*
Taking the institute for graduate credit	27	31%
Attended an Interactive Television Workshop	9	10%
Attended a Curriculum Institute last summer	11	13%
Previously taught over an interactive system	4	5%

Region	Number	Percent
AEA/Community College Region		
I	8	9%
II	6	7%
III	5	6%
IV	6	7%
V	9	10%
VI	1	1%
VII	3	3%
IX	3	3%
X	7	8%
XI	13	15%
XII	6	7%
XIII	9	10%
XIV	2	2%
XV	5	6%
XVI	5	6%

Indicate your level of experience with distance learning using interactive television.

	Number*	Percent
None	34	54%
Very little	15	24%
Some	9	14%
Quite a bit	3	5%
Extensive	2	3%

* - 63 of 88 responded

Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

Pretest n=61			Posttest n=64	
N	%		N	%
1	2%	Much more effective	1	2%
8	13%	More effective	6	9%
24	39%	About the same	26	41%
27	44%	Less effective	27	42%
1	2%	Much less effective	4	6%

Summary of Comments from 1994 Mathematics Institute Registration

Topic of Comment	N
Reason for wanting to participate in the institute	
Learn about ICN	30
Develop new/better curriculum	14
Learn about discrete math	11
Learn new methods/techniques for teaching	10
Keep up-to-date	10
Learn to use computers/technology in the classroom	3
Learn about assessment	3
Learn more about NCTM standards	3
Heard it was a valuable experience	1
Learn about Star Schools	1
For graduate degree use	1

Table includes multiple responses from 58 of 88 participants

Mathematics Institute 1994

Pre-Assessment

Level of knowledge about . . .	5-Extensive	4-Quite a bit	3-Some	2-Very little	1-None	Number of Responses	Mean	S.D.
NCTM Curriculum and Evaluation Standards for your grade level.	6%	55%	34%	3%	2%	64	3.61	0.73
NCTM Curriculum and Evaluation Standards for other grade levels.	2%	25%	48%	23%	2%	64	3.02	0.79
NCTM discrete mathematics standards.	3%	13%	31%	36%	17%	64	2.48	1.02
NCTM patterns standards.	2%	14%	39%	28%	17%	64	2.55	0.99
The Iowa Star Schools Project.	2%	14%	23%	33%	28%	64	2.28	1.08
Representing problem situations using recurrence relations.	0%	11%	38%	30%	22%	64	2.38	0.95
Representing problem situations using sequences.	0%	25%	45%	20%	9%	64	2.86	0.91
Representing problem situations using finite graphs.	5%	14%	41%	22%	19%	64	2.64	1.09
Use of connections among mathematical topics.	6%	19%	55%	16%	5%	64	3.06	0.89
Questions and tasks that elicit, engage, and challenge students' thinking.	8%	44%	41%	6%	2%	64	3.50	0.80
Issues related to math instruction in an interactive television environment.	0%	6%	14%	39%	41%	64	1.86	0.89
Mathematical pedagogy for student-centered classrooms.	0%	23%	38%	25%	14%	64	2.70	0.99
Successful teaching strategies used with interactive television.	0%	3%	16%	31%	50%	64	1.72	0.85

Ability to . . .	5-Very adequate	4-Adequate	3-Unsure	2-Inadequate	1-Very inadequate	Number of Responses	Mean	S.D.
Infuse NCTM Standards into the curriculum.	10%	46%	35%	6%	3%	63	3.52	0.88
Incorporate new mathematics methods in a plan for distance learning.	3%	22%	38%	20%	17%	64	2.73	1.09
Adapt lessons to use over an interactive system.	3%	16%	38%	25%	19%	64	2.59	1.07
Operate the equipment used in a distance classroom.	8%	33%	20%	14%	25%	64	2.84	1.34

Mathematics Institute 1994

Post-Assessment

Level of knowledge about . . .	5-Extensive	4-Quite a bit	3-Some	2-Very little	1-None	Number of Responses	Mean	S.D.
NCTM Curriculum and Evaluation Standards for your grade level.	12%	60%	27%	2%	0%	67	3.82	0.65
NCTM Curriculum and Evaluation Standards for other grade levels.	6%	28%	55%	8%	3%	67	3.27	0.81
NCTM discrete mathematics standards.	10%	37%	39%	12%	2%	67	3.43	0.89
NCTM patterns standards.	6%	40%	40%	13%	0%	67	3.39	0.80
The Iowa Star Schools Project.	5%	48%	45%	3%	0%	67	3.54	0.64
Representing problem situations using recurrence relations.	5%	34%	48%	12%	2%	67	3.28	0.79
Representing problem situations using sequences.	8%	51%	37%	5%	0%	67	3.61	0.70
Representing problem situations using finite graphs.	9%	38%	42%	9%	2%	66	3.44	0.84
Use of connections among mathematical topics.	9%	43%	39%	8%	2%	67	3.51	0.82
Questions and tasks that elicit, engage, and challenge students' thinking.	12%	58%	28%	2%	0%	67	3.81	0.66
Issues related to math instruction in an interactive television environment.	8%	24%	57%	10%	2%	67	3.25	0.80
Mathematical pedagogy for student-centered classrooms.	13%	31%	43%	12%	0%	67	3.46	0.88
Successful teaching strategies used with interactive television.	2%	25%	49%	22%	2%	67	3.03	0.78

Ability to . . .	5-Very adequate	4-Adequate	3-Unsure	2-Inadequate	1-Very inadequate	Number of Responses	Mean	S.D.
Infuse NCTM Standards into the curriculum.	18%	68%	14%	0%	0%	66	4.05	0.57
Incorporate new mathematics methods in a plan for distance learning.	3%	42%	48%	8%	0%	67	3.40	0.68
Adapt lessons to use over an interactive system.	5%	37%	48%	10%	0%	67	3.36	0.73
Operate the equipment used in a distance classroom.	13%	60%	21%	3%	3%	67	3.78	0.83

Mathematics Institute 1994

Evaluation

Items	*5-Excellent*	*4-Above Average*	*3-Average*	*2-Below Average*	*1-Poor*	***Number of Responses***	***Mean***	***S.D.***
Institute registration process.	15%	19%	43%	16%	6%	67	3.21	1.08
Usefulness of information received prior to the institute.	5%	13%	40%	30%	12%	67	2.69	1.00
Clarity of institute objectives.	2%	13%	43%	31%	10%	67	2.64	0.90
Effective use of time.	2%	8%	36%	46%	9%	67	2.46	0.82
Opportunity for participant interaction.	13%	31%	39%	13%	3%	67	3.39	0.98
Applicability of information.	3%	25%	42%	27%	3%	67	2.99	0.88
Quality of institute speakers.	10%	19%	51%	13%	6%	67	3.15	0.99
Organization of the institute.	3%	21%	43%	27%	6%	67	2.88	0.91
Quality of materials used during the institute.	8%	24%	55%	13%	0%	67	3.25	0.79
Usefulness of teacher sharing experience.	18%	33%	33%	15%	2%	67	3.51	1.01
Information about NCTM Curriculum and Evaluation Standards.	3%	24%	52%	19%	2%	67	3.08	0.79
Information about topics in discrete mathematics.	10%	28%	45%	16%	0%	67	3.33	0.88
Information about using interactive television in mathematics instruction.	3%	30%	48%	16%	3%	67	3.13	0.83
Information about assessment strategies.	0%	15%	56%	26%	3%	66	2.83	0.71
Overall rating for the institute.	**3%**	**20%**	**49%**	**23%**	**6%**	**66**	**2.91**	**0.89**

Mathematics Institute 1994

Evaluation (continued)

Items	4 - Very Satisfactory	3 - Satisfactory	2 - Unsatisfactory	1 - Very Unsatisfactory	Number of Responses	Mean	S.D.
February 19 session originating from the University of Iowa.	20%	42%	32%	7%	60	2.75	0.86
March 19 session originating from Storm Lake.	18%	53%	23%	5%	60	2.85	0.78
April 23 session originating from Hampton.	13%	57%	29%	2%	63	2.81	0.67
Use of the ICN to deliver the institute.	33%	48%	17%	2%	64	3.13	0.75
Conducting the institute on 3 separate days rather than 3 consecutive days.	58%	37%	4%	2%	57	3.51	0.66

Summary of Comments from 1994 Mathematics Institute Evaluation

Topic of Comment	**N**
Which components were most useful to you	
Learning about/using the ICN	15
Interacting/sharing with other teachers	13
Teaching examples	11
Materials specific to grade levels	5
Discrete math	4
Speakers/presenters	3
Learning about NCTM standards	1
Sequencing session	1
Provide suggestions for improving the institute	
Better organization	22
Fewer sites	13
Better information prior to the institute	12
Separate by grade level	11
Better role models/presenters	7
More teaching examples	5
More interaction/sharing time	5
Participant accountability	4
More hands-on/practice time	3
More information on the ICN	2
Bring in expert speakers	1
More direct instruction	1

Table includes multiple responses from 40 of 88 participants

APPENDIX O

Science Institutes

PRE-ASSESSMENT

Iowa Distance Education Alliance
Science Institute

Please write the last four digits of your social security number. ______________

Darken the appropriate circle with a #2 pencil.

1. Is there a distance education classroom using interactive television in your school?
   1=yes *2=no* *3=don't know*

2. Indicate your level of experience with distance learning using interactive television.
   1=no experience *2=very little* *3=some* *4=quite a bit* *5=extensive*

3. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

4. Have you attended one of the regional Interactive Television workshops presented by the Teacher Education Alliance?
   1=yes *2=no*

5. If no, are you scheduled to attend one?
   1=yes *2=no*

Use the following scale to indicate your level of knowledge about items 6 through 14.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

6. Issues in science education reform.
7. Project 2061.
8. Science-Technology Society and the Scope, Sequence, and Coordination Project.
9. Constructivist learning theory.
10. Alternative assessment approaches.
11. Developing curriculum materials that reflect science reform.
12. Successful teaching strategies using interactive television.
13. Equipment used in interactive distance classrooms.
14. Other organizations using distance technology in K-12 classroom education.

Use the following scale to rate your ability to conduct the next three activities.
1=very inadequate ***2=inadequate*** ***3=unsure*** ***4=adequate*** ***5=very adequate***

15. Design a curriculum unit that can be applied to a distance education environment.
16. Develop curriculum materials that reflect the science reform movement.
17. Operate the equipment used in a distance classroom.

OVER--------->

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

NCS Trans-Optic® M10-6659 2019 A2804-8

Describe the techniques you use in the classroom to assess your students.

A B C D E F G H I J
21 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
22 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
23 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
24 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
25 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
26 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
27 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
28 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
29 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
30 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
31 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
32 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
33 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
34 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
35 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
36 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
37 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
38 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
39 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
40 ①②③④⑤⑥⑦⑧⑨⓪

Describe the specific techniques and strategies you use in the classroom to develop student understanding and participation.

POST-ASSESSMENT

Iowa Distance Education Alliance
Science Institute

Please write the last four digits of your social security number. ____________

Darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2 through 10.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. Issues in science education reform.
3. Project 2061.
4. Science-Technology Society and the Scope, Sequence, and Coordination Project.
5. Constructivist learning theory.
6. Alternative assessment approaches.
7. Developing curriculum materials that reflect science reform.
8. Successful teaching strategies using interactive television.
9. Equipment used in interactive distance classrooms.
10. Other organizations using distance technology in K-12 classroom education.

Use the following scale to rate your ability to conduct the next three activities.
1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

11. Design a curriculum unit that can be applied to a distance education environment.
12. Develop curriculum materials that reflect the science reform movement.
13. Operate the equipment used in a distance classroom.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

NCS Trans-Optic® M10-6659 2019 A2804-8

EVALUATION

Iowa Distance Education Alliance
Science Institute

Please darken the appropriate circle with a #2 pencil. Use the following scale:

1= Poor *2=Below Average* *3=Average* *4=Above Average* *5=Excellent*

Please rate the following components:

1. Clarity of institute objectives.
2. Effective use of time.
3. Opportunity for participant interaction.
4. Applicability of information.
5. Organization of the institute.
6. Pre-institute assignment.
7. Panel discussion on science education reform.
8. Information presented in televideo downlink on distance education use.
9. Work of small group in designing a curriculum unit.
10. Information about Project 2061.
11. Information about Science-Technology Society and the Scope, Sequence, and Coordination Project
12. Information about constructivism.
13. Information about alternative assessment.
14. Lead teacher presentation on curriculum materials.
15. Group presentations of distance learning projects.

16 Overall rating of the institute.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER---------->

NCS Trans-Optic® M10-6659 2019 A2804-8

Indicate which components of the institute were most useful to you and explain why.

Provide suggestions for improving the institute.

A B C D E F G H I J
21 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
22 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
23 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
24 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
25 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
26 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
27 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
28 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
29 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
30 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
31 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
32 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
33 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
34 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
35 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
36 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
37 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
38 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
39 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
40 ①②③④⑤⑥⑦⑧⑨⓪

PRE-ASSESSMENT

Iowa Distance Education Alliance
1994 Science Institute

Please write the last four digits of your social security number. ______________

Darken the appropriate circle with a #2 pencil.

1. Is there a distance education classroom using interactive television in your school?
   1=yes *2=no* *3=don't know*

2. Indicate your level of experience with distance learning using interactive television.
   1=no experience *2=very little* *3=some* *4=quite a bit* *5=extensive*

3. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

4. Have you attended one of the regional Interactive Television workshops presented by the Teacher Education Alliance?
   1=yes *2=no*

5. If no, are you scheduled to attend one?
   1=yes *2=no*

Use the following scale to indicate your level of knowledge about items 6 through 14.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

6. Issues in science education reform.
7. Project 2061.
8. Science-Technology Society and the Scope, Sequence, and Coordination Project.
9. Constructivist learning theory.
10. Alternative assessment approaches.
11. Developing curriculum materials that reflect science reform.
12. Successful teaching strategies using interactive television.
13. Equipment used in interactive distance classrooms.
14. Other organizations using distance technology in K-12 classroom education.

Use the following scale to rate your ability to conduct the next three activities.
1=very inadequate* *2=inadequate* *3=unsure* *4=adequate* *5=very adequate

15. Design a curriculum unit that can be applied to a distance education environment.
16. Develop curriculum materials that reflect the science reform movement.
17. Operate the equipment used in a distance classroom.

222

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

POST-ASSESSMENT

Iowa Distance Education Alliance
1994 Science Institute

Please write the last four digits of your social security number. ____________

Darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2 through 10.
1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. Issues in science education reform.
3. Project 2061.
4. Science-Technology Society and the Scope, Sequence, and Coordination Project.
5. Constructivist learning theory.
6. Alternative assessment approaches.
7. Developing curriculum materials that reflect science reform.
8. Successful teaching strategies using interactive television.
9. Equipment used in interactive distance classrooms.
10. Other organizations using distance technology in K-12 classroom education.

Use the following scale to rate your ability to conduct the next three activities.
1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

11. Design a curriculum unit that can be applied to a distance education environment.
12. Develop curriculum materials that reflect the science reform movement.
13. Operate the equipment used in a distance classroom.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

NCS Trans-Optic® M10-6659 2019 A2804-8

EVALUATION

Iowa Distance Education Alliance
1994 Science Institute

Please darken the appropriate circle with a #2 pencil. Use the following scale to rate items 1 through 14:

1= Poor *2=Below Average* *3=Average* *4=Above Average* *5=Excellent*

Please rate the following components:

1. Institute registration process.
2. Usefulness of information received prior to the institute.
3. Clarity of institute objectives.
4. Effective use of time.
5. Opportunity for participant interaction.
6. Quality of materials used during the institute.
7. Quality of institute speakers.
8. Applicability of information.
9. Organization of the institute.
10. Information about the use of community resources.
11. Information about the relationship of the Science-Technology-Society with the Scope, Sequence, and Coordination Project, Project 2061, and other science reform efforts.
12. Information about constructivist learning theory.
13. Information about alternative assessment.
14. Overall rating for the institute.

Please rate items 15 through 20 using the following scale:

1=Very Unsatisfactory ***3=Satisfactory*** ***5=Not Applicable***
2=Unsatisfactory ***4=Very Satisfactory***

15. March 5 session originating from the Clarinda
16. April 16 session originating from Osage.
17. April 30 session originating from Emmetsburg.
18 Use of the ICN to deliver the institute.
19. Number of remote sites used for the institute.
20. Conducting the institute on three separate days rather than three consecutive days.

OVER---------->

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Indicate which components of the institute were most useful to you and explain why.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Provide suggestions for improving the institute.

Participant Information from 1993 Science Institute
Total Number of Participants = 67

Variable	Number	Percent
Sex		
Male	46	69%
Female	21	31%
Race		
Caucasian	66	99%
Unknown	1	1%
Occupation		
Teacher	59	89%
Administrator	1	1%
Curriculum Coordinator	2	3%
AEA Consultant	2	3%
Other	2	3%
Educational Degree Held		
Bachelors	32	51%
Masters	30	48%
Education Specialist	1	2%
Teaching Level		
Elementary	6	9%
Middle/Junior High	9	14%
High School	45	69%
Elementary and Middle School	1	1%
Junior High and High School	1	1%
K-12	1	1%
Postsecondary	1	1%
Subject Area		
Science	53	82%
Math and Science	10	15%
Other	2	3%
Have a distance education classroom in their school		
Yes	27	42%
No	34	53%
Don't Know	3	5%
Taking the institute for graduate credit	19	28%
Taking the institute for Continuing Education Credit	6	9%
Attended an Interactive Television Workshop	23	34%
Scheduled to attend a Workshop	19	28%
Previously taught on interactive television	1	1%

AEA/Community College Region

I	5	7%
II	5	7%
III	1	1%
IV	1	1%
V	9	13%
VI	1	1%
VII	4	6%
IX	3	5%
X	3	5%
XI	11	16%
XII	6	9%
XIII	3	5%
XIV	8	12%
XV	3	5%
XVI	4	6%

Average number of years as an educator *17 years*

Indicate your level of experience with distance learning using interactive television.

	Number	Percent
None	39	60%
Very little	16	25%
Some	10	15%
Quite a bit	0	0%
Extensive	0	0%

Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

Pretest			Posttest	
N	%		N	%
0	0%	Much more effective	0	0%
5	8%	More effective	17	27%
44	69%	About the same	39	61%
15	23%	Less effective	8	13%
0	0%	Much less effective	0	0%

1993 SCIENCE INSTITUTE

Pre-Assessment

Indicate level of knowledge	*5 - Extensive*	*4 - Quite a bit*	*3 -Some*	*2 - Very little*	*1 - None*	*Number of Responses*	*Mean*	*S.D.*
Issues in science education reform.	5%	24%	49%	18%	5%	67	3.06	0.89
Project 2061.	3%	10%	21%	22%	43%	67	2.08	1.16
Science -Technology - Society and the Scope, Sequence, and Coordination Project.	6%	15%	40%	16%	22%	67	2.66	1.16
Constructivist learning theory.	4%	10%	13%	24%	48%	67	2.06	1.43
Alternative assessment approaches.	2%	28%	45%	19%	6%	67	3.00	0.89
Developing curriculum materials that reflect science reform.	5%	18%	36%	30%	12%	67	2.73	1.04
Successful teaching strategies using interactive television.	0%	6%	15%	45%	34%	67	1.93	0.86
Equipment used in interactive distance classrooms.	2%	16%	25%	33%	24%	67	2.39	1.07
Other organizations using distance technology in K-12 classroom education.	0%	3%	20%	42%	35%	66	1.91	0.82

1993 SCIENCE INSTITUTE

Pre-Assessment (PART 2)

Rate ability	5=very adequate	4=adequate	3=unsure	2=inadequate	1=very inadequate	Number of Responses	Mean	S.D.
Design a curriculum unit applicable to a distance education environment.	6%	33%	36%	21%	5%	67	3.15	0.97
Develop curriculum materials that reflect the science reform movement.	9%	34%	31%	18%	8%	67	3.19	1.08
Operate the equipment used in a distance education classroom.	10%	36%	27%	10%	16%	67	3.13	1.24

1993 SCIENCE INSTITUTE

Post-Assessment

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
Issues in science education reform.	9%	66%	23%	2%	0%	65	3.83	0.60
Project 2061.	5%	52%	35%	8%	0%	65	3.54	0.71
Science -Technology - Society and the Scope, Sequence, and Coordination Project.	8%	55%	34%	3%	0%	64	3.67	0.67
Constructivist learning theory.	8%	46%	38%	8%	0%	65	3.54	0.75
Alternative assessment approaches.	6%	46%	42%	6%	0%	65	3.52	0.71
Developing curriculum materials that reflect science reform.	8%	51%	35%	6%	0%	65	3.60	0.73
Successful teaching strategies using interactive television.	1%	46%	42%	8%	3%	65	3.35	0.78
Equipment used in interactive distance classrooms.	5%	37%	39%	19%	1%	65	3.25	0.88
Other organizations using distance technology in K-12 classroom education.	0%	19%	53%	25%	3%	64	2.88	0.75

Post-Assessment (PART 2)

Rate ability	5=very adequate	4=adequate	3=unsure	2=inadequate	1=very inadequate	Number of Responses	Mean	S.D.
Design a curriculum unit applicable to a distance education environment.	9%	60%	28%	3%	0%	65	3.75	0.66
Develop curriculum materials that reflect the science reform movement.	17%	59%	20%	5%	0%	65	3.88	0.74
Operate the equipment used in a distance education classroom.	8%	38%	45%	5%	5%	65	3.40	0.88

Evaluation

Institute Components	5 - Excellent	4 - Above average	3 -Average	2 - Below Average	1 - Poor	Number of Responses	Mean	S.D.
Clarity of institute objectives.	13%	41%	40%	6%	0%	63	3.60	0.79
Effective use of time.	11%	36%	33%	20%	0%	64	3.38	0.93
Opportunity for participant interaction.	34%	28%	36%	2%	0%	64	3.95	0.88
Applicability of information.	22%	33%	41%	3%	0%	63	3.75	0.84
Organization of workshop content.	25%	41%	25%	8%	1%	64	3.80	0.96
Pre-institute assignment.	6%	23%	59%	8%	3%	64	3.22	0.81
Panel discussion on science education reform.	11%	34%	47%	8%	0%	64	3.48	0.80
Information presented in televideo downlink on distance education.	11%	33%	41%	11%	5%	64	3.34	0.98
Work of small group in designing a curriculum unit.	23%	38%	36%	3%	0%	64	3.81	0.83
Information about Project 2061.	9%	38%	47%	6%	0%	64	3.50	0.76
Information about Science - Technology - Society and the Scope, Sequence, and Coordination Project.	9%	41%	45%	3%	2%	64	3.53	0.78
Information about constructivism.	13%	45%	33%	9%	0%	64	3.61	0.83
Information about alternative assessment.	3%	28%	53%	13%	3%	64	3.16	0.80
Lead teacher presentations on curriculum materials.	3%	48%	40%	7%	2%	62	3.45	0.74
Group presentations of distance learning projects.	19%	50%	23%	8%	0%	62	3.81	0.85
Overall rating of the institute.	16%	48%	33%	2%	2%	64	3.75	0.80

Summary of Comments from 1993 Science Institute Evaluations

Topic of Comment	N
Which components were most useful to you	
Science education reform session	21
Sharing with other teachers	18
Hands-on presentations	17
Information on distance education	6
Group work	6
Information on Project 2061	4
Information on constructivism	3
Curriculum materials	2
Assessment information	2
The panel discussion	1
The assignment prior to the institute	1
Internet presentation	1
All	1
Provide suggestions for improving the institute	
More time to use the equipment	5
More community building among participants	4
Less time/less is more	4
Use actual equipment rather than technician operated	3
Give fewer lectures/use the techniques advocated	3
Delete poor speakers (Michigan, Standards, Assessment)	3
Better inform administrators	2
More examples of specific programs/materials	2
Shorter lunches and breaks	2
Better communication prior to the institute	1
Small group discussions following the speakers	1
Provide examples of alternative assessment	1
Better coordination of speakers and objectives	1
Fewer small group presentations	1
More time for sharing	1
Pre-assess the audience	1

Table includes multiple responses from 48 of 67 participants

Participant Information from 1994 Science Institute
Total Number of Participants = 82

Variable	Number	Percent
Sex		
Male	44	54%
Female	38	46%
Race		
Caucasian	77	94%
No Response	5	6%
Occupation		
Teacher	72	88%
Administrator	4	5%
AEA Consultant	1	1%
Other	1	1%
No Response	4	5%
Educational Degree Held		
Bachelors	50	61%
Masters	25	31%
Education Specialist	3	4%
No Response	4	5%
Teaching Level		
Elementary	19	23%
Middle/Junior High	16	20%
High School	34	42%
Elementary and Middle School	1	1%
Junior High and High School	8	10%
K-12	1	1%
Postsecondary and High School	3	4%
Subject Area		
Science	58	71%
Mathematics and Science	21	26%
Literacy	1	1%
Foreign Language and Literacy	1	1%
No Response	1	1%
Have a distance education classroom in their school		
Yes	26	32%
No	45	55%
Don't Know	3	4%
No Response	8	10%
Average number of years as an educator	*16 years*	*Range 1 to 34 years*
Taking the institute for graduate credit	17	21%
Attended an Interactive Television Workshop	10	12%
Scheduled to attend an ITV Workshop	35	43%
Attended a Curriculum Institute last summer	3	4%
Previously taught over an interactive tystem	5	6%

Region	Number	Percent
AEA/Community College Region		
I	3	4%
II	7	9%
III	11	13%
IV	5	6%
V	9	11%
VI	3	4%
VII	8	10%
IX	2	2%
X	7	9%
XI	8	10%
XII	6	7%
XIII	5	6%
XIV	3	4%
XV	1	1%
XVI	4	5%

Indicate your level of experience with distance learning using interactive television.

	Number*	Percent
None	45	61%
Very little	13	18%
Some	12	16%
Quite a bit	3	4%
Extensive	1	1%

* - 74 of 82 responded

Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

Pretest n=70			Posttest n=57	
Number	Percent		Number	Percent
1	1%	Much more effective	5	9%
12	17%	More effective	13	23%
42	60%	About the same	20	35%
14	20%	Less effective	18	32%
1	1%	Much less effective	1	2%

Summary of Comments from 1994 Science Institute Registration

Topic of Comment	N
Reason for wanting to participate in the institute	
Learn about ICN	26
Learn new methods/techniques for teaching	13
Learn about science curriculum reforms	13
To keep up-to-date	10
Develop new/better curriculum	10
Learn to use computers/technology in the classroom	4
Learn about science standards	2
Curiosity	2
For graduate degree use	2
Heard it was a valuable experience	2
Share with other educators	1

Table includes multiple responses from 68 of 82 participants

Science Institute 1994

Pre-Assessment

Level of knowledge about . . .	5-Extensive	4-Quite a bit	3-Some	2-Very little	1-None	Number of Responses	Mean	S.D.
Issues in science education reform.	5%	19%	55%	16%	4%	74	3.05	0.86
Project 2061.	3%	14%	26%	14%	45%	74	2.16	1.22
Science-Technology Society and Scope, Sequence, and Coordination Project.	12%	14%	35%	22%	18%	74	2.81	1.24
Constructivist learning theory.	4%	15%	15%	22%	45%	74	2.12	1.25
Alternative assessment approaches.	10%	24%	38%	16%	12%	74	3.03	1.13
Developing curriculum materials that reflect science reform.	6%	16%	37%	30%	11%	73	2.75	1.04
Successful teaching strategies using interactive television.	3%	1%	11%	27%	58%	73	1.64	0.93
Equipment used in interactive distance classrooms.	1%	11%	22%	22%	45%	74	2.03	1.11
Other organizations using distance technology in K-12 classroom education.	1%	1%	14%	34%	50%	74	1.70	0.86

Ability to . . .	5 - Very adequate	4 - Adequate	3 - Unsure	2 - Inadequate	1 - Very inadequate	Number of Responses	Mean	S.D.
Design a curriculum unit applicable to a distance education environment.	8%	19%	33%	11%	29%	73	2.67	1.30
Develop curriculum materials that refelect the science reform movement.	8%	26%	39%	14%	14%	74	3.01	1.13
Operate the equipment used in a distance classroom.	10%	23%	23%	16%	28%	74	2.69	1.35

Science Institute 1994

Post-Assessment

Level of knowledge about . . .	5-Extensive	4-Quite a bit	3-Some	2-Very little	1-None	Number of Responses	Mean	S.D.
Issues in science education reform.	13%	59%	24%	5%	0%	63	3.79	0.72
Project 2061.	10%	27%	46%	14%	3%	63	3.25	0.93
Science-Technology Society and Scope, Sequence, and Coordination Project.	18%	49%	27%	6%	0%	63	3.78	0.81
Constructivist learning theory.	10%	48%	32%	6%	5%	63	3.51	0.93
Alternative assessment approaches.	16%	43%	35%	6%	0%	63	3.68	0.82
Developing curriculum materials that reflect science reform.	16%	37%	40%	8%	0%	63	3.60	0.85
Successful teaching strategies using interactive television.	8%	22%	43%	19%	8%	63	3.03	1.03
Equipment used in interactive distance classrooms.	14%	30%	37%	18%	2%	63	3.38	0.99
Other organizations using distance technology in K-12 classroom education.	8%	18%	29%	33%	13%	63	2.75	1.14

Ability to . . .	5 - Very adequate	4 - Adequate	3 - Unsure	2 - Inadequate	1 - Very inadequate	Number of Responses	Mean	S.D.
Design a curriculum unit applicable to a distance education environment.	7%	45%	29%	15%	5%	62	3.34	0.97
Develop curriculum materials that refelect the science reform movement.	18%	49%	29%	3%	2%	63	3.78	0.83
Operate the equipment used in a distance classroom.	21%	41%	11%	19%	8%	63	3.48	1.24

Science Institute 1994

Evaluation

Items	5-Excellent	4-Above Average	3-Average	2-Below Average	1-Poor	Number of Responses	Mean	S.D.
Institute registration process.	16%	29%	44%	8%	3%	62	3.47	0.97
Usefulness of information received prior to the institute.	2%	26%	47%	15%	11%	62	2.92	0.96
Clarity of institute objectives.	0%	29%	29%	32%	10%	62	2.77	0.98
Effective use of time.	2%	29%	29%	31%	10%	62	2.82	1.02
Opportunity for participant interaction.	24%	37%	29%	8%	2%	62	3.74	0.97
Quality of materials used during the institute.	8%	39%	40%	10%	3%	62	3.39	0.89
Quality of institute speakers.	8%	44%	36%	11%	2%	62	3.45	0.86
Applicability of information.	11%	32%	45%	10%	2%	62	3.42	0.88
Organization of the institute.	5%	32%	40%	19%	3%	62	3.16	0.91
Information about the use of community resources.	10%	27%	44%	13%	7%	62	3.21	1.01
Information about the relationship of STS with SS & C and Project 2061.	10%	32%	32%	21%	5%	62	3.21	1.04
Information about constructivist learning theory.	10%	32%	32%	23%	3%	62	3.23	1.02
Information about alternative assessment.	8%	36%	37%	16%	3%	62	3.29	0.95
Overall rating for the institute.	**3%**	**38%**	**36%**	**18%**	**5%**	**61**	**3.16**	**0.93**

Science Institute 1994

Evaluation (continued)

Items	4 - Very Satisfactory	3 - Satisfactory	2 - Unsatisfactory	1 - Very Unsatisfactory	Number of Responses	Mean	S.D.
March 5 session orginating from Clarinda.	29%	49%	18%	4%	51	3.04	0.80
April 16 session originating from Osage.	26%	53%	18%	4%	57	3.02	0.77
April 30 session originating from Emmetsburg.	40%	47%	7%	5%	57	3.23	0.80
Use of the ICN to deliver the institute.	57%	32%	8%	4%	53	3.42	0.80
Number of remote sites used for the institute.	50%	42%	6%	2%	52	3.40	0.69
Conducting the institute on 3 separate days rather than 3 consecutive days.	60%	36%	0%	4%	47	3.51	0.72

Summary of Comments from 1994 Science Institute Evaluation

Topic of Comment	**N**
Which components were most useful to you	
Teaching examples	18
STS information	6
Interacting/sharing with other teachers	5
Information on science reform	4
Learning about/using ICN	5
Question and answer time	1
Materials provided	1
Good site facilitator(s)	1
Provide suggestions for improving the institute	
Address other major science reform efforts	8
More teaching examples	6
Better information prior to the institute	5
More interaction/sharing time	4
Separate by grade level	2
Less lecturing	2
Provide classroom management techniques	2
More hands on/practice time	2
More information prior to examples	1
Use more than one origination site	1
Better site facilitators	1
Use all sites	1
Better organization	1
Better follow-up	1
Make sure presenters know how to use the system	1

Table includes multiple responses from 29 of 82 participants

APPENDIX P

Foreign Language Institutes

PRE-ASSESSMENT

Iowa Distance Education Alliance
Foreign Language Institute

Please write the last four digits of your social security number. ______________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

2. Indicate your level of experience with distance learning using interactive television.
   1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

3. Is there a distance education classroom using interactive television in your school?
   1=yes *2=no* *3=don't know*

4. Have you attended one of the regional Interactive Television workshops presented by the Teacher Education Alliance?
   1=yes *2=no*

5. If no, are you scheduled to attend one?
   1=yes *2=no*

Use the following scale to indicate your level of knowledge about items 6 through 20 related to foreign language instruction.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

6. Basic text and graphics facilities provided by the Macintosh computer.
7. Using basic text and graphics facilities to prepare worksheets.
8. Using HyperCard software as an authoring tool to design customized record-keeping materials.
9. Using HyperCard software as an authoring tool to design customized foreign language materials.
10. Using sound recording software (e.g. MacRecorder) to create customized computerized audio materials.
11. Using authoring tools to create customized multi-media foreign language materials.
12. The rationale for integrating computer technology into foreign language instruction.
13. How to state the learning objectives of a foreign language course.
14. Selecting suitable instructional materials for language learning.
15. How to design foreign language learning activities and tasks.
16. How to instruct students using student-centered activities.
17. Monitoring and assessing students' progress in foreign language learning.
18. How to evaluate foreign language curriculum.
19. Effective foreign language pedagogy.
20. Research findings related to the use of interactive television in foreign language distance education.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER

NCS Trans-Optic® M10-8859 2019 A2804-8

Use the following scale to indicate your level of knowledge about items 21 through 28 related to interactive distance education.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

21. The rationale for integrating computer technology into interactive television distance education?
22. The unique characteristics of interactive television.
23. The components of an interactive television system.
24. The rationale for using interactive technology to reach distant learners.
25. The resources needed to use interactive television for distance education.
26. Successful teaching strategies used with interactive television.
27. Developing lessons to use over an interactive television system.
28. Critical issues related to the use of interactive television for distance education.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

POST ASSESSMENT

Iowa Distance Education Alliance
Foreign Language Institute

Please write the last four digits of your social security number. ______________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2 through 24 .

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. Basic text and graphics facilities provided by the Macintosh computer.
3. Using basic text and graphics facilities to prepare worksheets.
4. Using HyperCard software as an authoring tool to design customized record-keeping materials.
5. Using HyperCard software as an authoring tool to design customized foreign language materials.
6. Using sound recording software (e.g. MacRecorder) to create customized computerized audio materials.
7. Using authoring tools to create customized multi-media foreign language materials.
8. The rationale for integrating computer technology into foreign language instruction.
9. How to state the learning objectives of a foreign language course.
10. Selecting suitable instructional materials for language learning.
11. How to design foreign language learning activities and tasks.
12. How to instruct students using student-centered activities.
13. Monitoring and assessing students' progress in foreign language learning.
14. How to evaluate foreign language curriculum.
15. Effective foreign language pedagogy.
16. Research findings related to the use of interactive television in foreign language distance education.
17. The rationale for integrating computer technology into interactive television for distance education?
18. The unique characteristics of interactive television.
19. The components of an interactive television system.
20. The rationale for using interactive technology to reach distant learners.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER------------------->

A B C D E F G H I J
21 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
22 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
23 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
24 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
25 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
26 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
27 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
28 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
29 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
30 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
31 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
32 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
33 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
34 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
35 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
36 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
37 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
38 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
39 ①②③④⑤⑥⑦⑧⑨⓪
A B C D E F G H I J
40 ①②③④⑤⑥⑦⑧⑨⓪

21. The resources needed to use interactive television for distance education.

22. Successful teaching strategies used with interactive television.

23. Developing lessons to use over an interactive television system.

24. Critical issues related to the use of interactive television for distance education.

EVALUATION

Iowa Distance Education Alliance
Foreign Language Institute

Please darken the appropriate circle with a #2 pencil. Use the following scale:

1=Poor ***2=Below Average*** ***3=Average*** ***4=Above Average*** ***5=Excellent***

Please rate the following components:

1. Clarity of institute objectives.
2. Organization of the institute.
3. Effective use of time.
4. Opportunity for participant interaction.
5. Applicability of information.
6. Information about using interactive television for foreign language instruction.
7. Information about the use of computer technologies for foreign language instruction.
8. Information about foreign language curricular design.
9. Information about effective foreign language pedagogy.
10. Overall rating of the institute.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER ---------------------->

NCS Trans-Optic® M10-6659 18 A2804-8

Indicate which components of the institute were most useful to you and explain why.

Provide suggestions for improving the institute.

A B C D E F G H I J
21 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
22 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
23 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
24 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
25 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
26 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
27 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
28 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
29 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
30 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
31 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
32 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
33 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
34 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
35 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
36 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
37 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
38 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
39 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
40 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪

PRE-ASSESSMENT

Iowa Distance Education Alliance
1994 Foreign Language Institute

Please write the last four digits of your social security number. ______________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

2. Indicate your level of experience with distance learning using interactive television.
   1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

3. Is there a distance education classroom using interactive television in your school?
   1=yes *2=no* *3=don't know*

4. Have you attended one of the regional Interactive Television workshops presented by the Teacher Education Alliance?
   1=yes *2=no*

5. If no, are you scheduled to attend one?
   1=yes *2=no*

Use the following scale to indicate your level of knowledge about items 6 through 31 related to foreign language instruction.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

6. Basic text and graphics facilities provided by an icon-driven computer technology (e.g. Macintosh).
7. Integrating text and graphics.
8. Using sound recording software to create customized audio materials.
9. Using HyperCard as an authoring tool to create customized materials.
10. Digitizing video into the computer.
11. Internet and e-mail facilities.
12. The rationale for integrating computer technology into foreign language instruction.
13. The rationale for integrating computer technology into fiber-optic networked multi-site foreign language instruction.
14. The difference between evaluation and assessment in the foreign language classroom.
15. AAT's (teacher association's) professional standards for teacher evaluation.
16. Issues in the development of National Standards for foreign language instruction.
17. Assessing and evaluating students' progress in foreign language learning.
18. Using portfolio assessment in the classroom.
19. Using portfolio assessment for your own professional development.
20. The criteria used to assess students' portfolios.

OVER------------->

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

21. The difference between the use of a standardized test and portfolio assessment.
22. Transforming textbook and workbook activities into communicative activities which center on the four skills.
23. Communicative and cooperative activities to be used with foreign language instruction on the fiber-optic network.
24. Reading activities to be used with foreign language instruction on the fiber-optic network.
25. Use of authentic materials (realia) with foreign language instruction on the fiber-optic network.
26. The unique characteristics of interactive television.
27. The components of an interactive television system.
28. The rationale for using interactive technology to reach distant learners.
29. The resources needed to use interactive television for distance education.
30. Developing lessons to use over an interactive television system.
31. Critical issues related to the use of interactive television for distance education.

POST-ASSESSMENT

Iowa Distance Education Alliance
1994 Foreign Language Institute

Please write the last four digits of your social security number. ____________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2 through 27 related to foreign language instruction.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. Basic text and graphics facilities provided by an icon-driven computer technology (e.g. Macintosh).
3. Integrating text and graphics.
4. Using sound recording software to create customized audio materials.
5. Using HyperCard as an authoring tool to create customized materials.
6. Digitizing video into the computer.
7. Internet and e-mail facilities.
8. The rationale for integrating computer technology into foreign language instruction.
9. The rationale for integrating computer technology into fiber-optic networked multi-site foreign language instruction.
10. The difference between evaluation and assessment in the foreign language classroom.
11. AAT's (teacher association's) professional standards for teacher evaluation.
12. Issues in the development of National Standards for foreign language instruction.
13. Assessing and evaluating students' progress in foreign language learning.
14. Using portfolio assessment in the classroom.
15. Using portfolio assessment for your own professional development.
16. The criteria used to assess students' portfolios.
17. The differences between the use of a standardized test and portfolio assessment.
18. Transforming textbook and workbook activities into communicative activities which focus on the four skills.
19. Communicative and cooperative activities to be used with foreign language instruction on the fiber-optic network.
20. Reading activities to be used with foreign language instruction on the fiber-optic network.

OVER---------------------->

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

21. Use of authentic materials (realia) with foreign language instruction on the fiber-optic network.

22. The unique characteristics of interactive television.

23. The components of an interactive television system.

24. The rationale for using interactive technology to reach distant learners.

25. The resources needed to use interactive television for distance education.

26. Developing lessons to use over an interactive television system.

27. Critical issues related to the use of interactive television for distance education.

EVALUATION

Iowa Distance Education Alliance
1994 Foreign Language Institute

Please darken the appropriate circle with a #2 pencil. Use the following scale:

1=Poor *2=Below Average* *3=Average* *4=Above Average* *5=Excellent*

Please rate the following components:

1. Institute registration process.
2. Information received prior to the institute.
3. Clarity of institute objectives.
4. Effective use of time.
5. Opportunity for participant interaction.
6. Quality of materials used during the institute.
7. Quality of institute speakers.
8. Applicability of information.
9. Organization of the institute.
10. Information about computer facilitated foreign language instruction.
11. Information about using interactive television in foreign language instruction.
12. Information about National Standards for foreign language instruction.
13. Information about portfolio assessment.
14. Information about communicative activities in foreign language instruction.
15. Demonstrations using an interactive system.
16. Effectiveness of the Institute leaders.
17. Overall rating of the Institute.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER-------------->

Indicate which components of the Institute were most useful to you and explain why.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Provide suggestions for improving the Institute.

Participant Information from 1993 Foreign Language Institute
Total Number of Participants = 34

Variable	Number	Percent
Sex		
Male	6	18%
Female	28	82%
Race		
Caucasian	31	91%
Hispanic	2	6%
Unknown	1	3%
Occupation		
Teacher	30	88%
Other	4	12%
Educational Degree Held		
Bachelors	24	73%
Masters	9	27%
Teaching Level		
Elementary	0	0%
Middle/Junior High	1	3%
High School	25	76%
Junior High and High School	4	12%
K-12	2	6%
Postsecondary	1	3%
Subject Area		
Foreign Language	32	94%
Other	2	6%
Have a distance education classroom in their school		
Yes	11	33%
No	22	67%
Taking the institute for graduate credit	12	35%
Taking the institute for Continuing Education Credit	2	6%
Attended an Interactive Television Workshop	8	24%
Scheduled to attend a Workshop	5	15%
Previously taught on interactive television	3	9%

AEA/Community College Region

I	2	6%
II	5	15%
III	0	0%
IV	3	9%
V	3	9%
VI	1	3%
VII	5	15%
IX	1	3%
X	3	9%
XI	3	9%
XII	1	3%
XIII	2	6%
XIV	1	3%
XV	3	9%
XVI	1	3%

Average number of years as an educator *16 years*

Indicate your level of experience with distance learning using interactive television.

	Number	Percent
None	14	42%
Very little	9	27%
Some	8	24%
Quite a bit	1	3%
Extensive	1	3%

Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

Pretest			Posttest	
N	%		N	%
0	0%	Much more effective	1	3%
4	12%	More effective	5	16%
7	21%	About the same	10	32%
21	62%	Less effective	14	45%
1	3%	Much less effective	1	3%

1993 FOREIGN LANGUAGE INSTITUTE

Pre-Assessment

Indicate level of knowledge	*5 - Extensive*	*4 - Quite a bit*	*3 -Some*	*2 - Very little*	*1 - None*	*Number of Responses*	*Mean*	*S.D.*
Basic text and graphics provided by Macintosh computer.	0%	9%	32%	29%	29%	34	2.21	0.98
Using basic text and graphics facilities to prepare worksheets.	0%	15%	32%	21%	32%	34	2.29	1.09
Using Hypercard software as an authoring tool for customized record-keeping materials.	0%	0%	6%	15%	79%	34	1.27	0.57
Using Hypercard software as an authoring tool for customized foreign language materials.	0%	0%	3%	12%	85%	34	1.18	0.46
Using sound recording software to create customized computerized audio materials.	0%	0%	6%	9%	85%	34	1.21	0.54
Using authoring tools to create customized multi-media foreign language materials.	0%	0%	6%	15%	79%	34	1.27	0.57
The rationale for integrating computer technology into foreign language instruction.	0%	12%	32%	35%	21%	34	2.35	0.95
How to state learning objectives of a foreign language course.	24%	29%	41%	6%	0%	34	3.71	0.91
Selecting suitable instructional materials for language learning.	21%	55%	24%	0%	0%	33	3.97	0.68
How to design foreign language learning activities and tasks.	21%	50%	24%	6%	0%	34	3.85	0.82
How to instruct students using student-centered activities.	24%	41%	32%	3%	0%	34	3.85	0.82
Monitoring and assessing students' progress in foreign language.	18%	41%	41%	0%	0%	34	3.77	0.74
How to evaluate foreign language curriculum.	12%	38%	32%	18%	0%	34	3.44	0.93
Effective foreign language pedagogy.	21%	32%	38%	6%	3%	34	3.62	0.99

Pre-Assessment - Part 2

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
Research findings related to the use of interactive television in foreign language distance education.	0%	3%	9%	29%	59%	34	1.56	0.79
The rationale for integrating computer technology into interactive television distance education.	3%	9%	18%	33%	36%	33	2.09	1.10
The unique characteristics of interactive television.	6%	9%	21%	24%	39%	33	2.18	1.24
The components of an interactive television system.	6%	9%	15%	15%	55%	33	1.97	1.29
The rationale for using interactive technology to reach distant learners.	9%	15%	12%	49%	15%	33	2.55	1.20
The resources needed to use interactive television for distance education.	6%	9%	12%	27%	46%	33	2.03	1.24
Successful teaching strategies used with interactive television.	0%	12%	15%	21%	52%	33	1.88	1.08
Developing lessons to use over an interactive television system.	0%	6%	18%	12%	64%	33	1.67	0.99
Critical issues related to the use of interactive television for distance education.	3%	9%	15%	24%	49%	33	1.94	1.14

1993 FOREIGN LANGUAGE INSTITUTE

Post-Assessment

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
Basic text and graphics provided by Macintosh computer.	6%	25%	59%	9%	0%	32	3.28	0.73
Using basic text and graphics facilities to prepare worksheets.	6%	34%	41%	16%	3%	32	3.25	0.92
Using Hypercard software as an authoring tool for customized record-keeping materials.	6%	6%	50%	25%	13%	32	2.69	1.00
Using Hypercard software as an authoring tool for customized foreign language materials.	6%	13%	59%	19%	3%	32	3.00	0.84
Using sound recording software to create customized computerized audio materials.	0%	9%	56%	25%	9%	32	2.66	0.79
Using authoring tools to create customized multi-media foreign language materials.	0%	25%	53%	22%	0%	32	3.03	0.70
The rationale for integrating computer technology into foreign language instruction.	16%	56%	25%	3%	0%	32	3.84	0.72
How to state learning objectives of a foreign language course.	31%	50%	16%	3%	0%	32	4.09	0.78
Selecting suitable instructional materials for language learning.	38%	50%	9%	3%	0%	32	4.22	0.75
How to design foreign language learning activities and tasks.	34%	50%	13%	3%	0%	32	4.16	0.77
How to instruct students using student-centered activities.	28%	44%	28%	0%	0%	32	4.00	0.76
Monitoring and assessing students' progress in foreign language.	22%	47%	28%	3%	0%	32	3.88	0.79
How to evaluate foreign language curriculum.	22%	41%	38%	0%	0%	32	3.84	0.77
Effective foreign language pedagogy.	22%	44%	31%	3%	0%	32	3.84	0.81

Post-Assessment - Part 2

Indicate level of knowledge	*5 - Extensive*	*4 - Quite a bit*	*3 -Some*	*2 - Very little*	*1 - None*	**Number of Responses**	**Mean**	**S.D.**
Research findings related to the use of interactive television in foreign language distance education.	0%	9%	34%	53%	3%	32	2.50	0.72
The rationale for integrating computer technology into interactive television distance education.	13%	28%	38%	22%	0%	32	3.31	0.97
The unique characteristics of interactive television.	25%	38%	31%	6%	0%	32	3.81	0.90
The components of an interactive television system.	22%	31%	38%	9%	0%	32	3.66	0.94
The rationale for using interactive technology to reach distant learners.	25%	34%	28%	13%	0%	32	3.72	0.99
The resources needed to use interactive television for distance education.	16%	36%	39%	10%	0%	31	3.58	0.89
Successful teaching strategies used with interactive television.	6%	29%	55%	10%	0%	31	3.32	0.75
Developing lessons to use over an interactive television system.	10%	26%	58%	6%	0%	31	3.39	0.76
Critical issues related to the use of interactive television for distance education.	6%	39%	36%	19%	0%	31	3.32	0.87

1993 FOREIGN LANGUAGE INSTITUTE

Evaluation

Institute Components	5 - Excellent	4 - Above average	3 -Average	2 - Below Average	1 - Poor	Number of Responses	Mean	S.D.
Clarity of objectives.	10%	36%	45%	10%	0%	31	3.45	0.80
Organization of the institute.	19%	50%	31%	0%	0%	32	3.88	0.71
Effective use of time.	9%	50%	28%	13%	0%	32	3.56	0.84
Opportunity for participant interaction.	38%	50%	3%	9%	0%	32	4.16	0.88
Applicability of information.	31%	44%	25%	0%	0%	32	4.06	0.76
Information about using interactive television for foreign language instruction.	31%	50%	19%	0%	0%	32	4.13	0.71
Information about the use of computer technologies for foreign language instruction.	38%	53%	9%	0%	0%	32	4.28	0.63
Information about foreign language curricular design.	19%	39%	36%	6%	0%	31	3.71	0.86
Information about effective foreign language pedagogy.	9%	41%	31%	19%	0%	32	3.41	0.91
Overall rating of the institute.	22%	53%	25%	0%	0%	32	3.97	0.70

Summary of Comments from 1993 Foreign Language Institute Evaluation

Topic of Comment	N
Which components were most useful to you	
Hypercard/computer session	21
Using the equipment	17
Curriculum discussions	6
Sharing with other teachers	5
Provide suggestions for improving the institute	
More interaction/sharing time	11
Using actual equipment	8
Shorter time/restructuring mini-lessons	8
Better information prior to institute	5
Unlimited topics for mini-lessons	4
More time for feedback after mini-lesson	4
More information on curriculum issues	3
More computer time	3
Equal pay across regions	3
Demonstrate a good lesson	1
Avoid repeating workshop information	1
Group participants by computer knowledge	1
Make the institute longer	1

Table includes multiple responses from 27 of 34 participants

Participant Information from 1994 Foreign Language Institute
Total Number of Participants = 29

Variable	Number	Percent
Sex		
Male	4	14%
Female	25	86%
Race		
Caucasian	25	86%
No Response	4	14%
Occupation		
Teacher	29	100%
Educational Degree Held		
Bachelors	20	69%
Masters	4	14%
No Response	5	17%
Teaching Level		
Middle/Junior High	1	3%
High School	13	45%
Elementary and Middle	2	7%
Junior High and High School	4	14%
K-12	2	7%
Postsecondary and High School	2	7%
No Response	5	17%
Subject Area		
Foreign Language	28	97%
No Response	1	3%
Have a distance education classroom in their school		
Yes	6	21%
No	22	76%
No Response	1	3%
Average number of years as an educator	*11 years*	*Range 1 to 25 years*
Taking the institute for graduate credit	9	31%
Attended an Interactive Television Workshop	21	72%
Scheduled to attend an ITV Workshop	2	7%
Attended a Curriculum Institute last summer	1	3%
Previously taught over an interactive system	3	10%

Region	Number	Percent
AEA/Community College Region		
I	2	7%
II	2	7%
III	1	3%
IV	0	0%
V	2	7%
VI	1	3%
VII	2	7%
IX	4	14%
X	0	0%
XI	4	14%
XII	2	7%
XIII	3	10%
XIV	2	7%
XV	3	10%
XVI	1	3%

Indicate your level of experience with distance learning using interactive television.

	Number*	Percent
None	11	39%
Very little	9	32%
Some	6	21%
Quite a bit	0	0%
Extensive	2	7%

* - 28 of 29 responded

Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

Pretest n=28			**Posttest** n=27	
N	%		N	%
0	0%	Much more effective	0	0%
3	11%	More effective	2	7%
2	7%	About the same	8	30%
21	75%	Less effective	16	59%
2	7%	Much less effective	1	4%

Summary of Comments from 1994 Foreign Language Institute Registration

Topic of Comment	**N**
Reason for wanting to participate in the institute	
Learn about ICN	11
Learn new methods/techniques for teaching	7
Learn to use computers/technology in the classroom	6
Develop new/better curriculum	5
Learn about assessment (portfolios)	3
Share with other educators	3
To keep up to date	2
Learn about Star Schools	1
Build on what was learned last year	1

Table includes multiple responses from 23 of 29 participants

Foreign Language Institute 1994

Pre-Assessment

Level of knowledge about . . .	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
Basic text and graphics provided by Macintosh computer.	4%	25%	21%	14%	36%	28	2.46	1.32
Integrating text and graphics.	4%	7%	29%	7%	54%	28	2.00	1.22
Using sound recording software to create customized audio materials.	0%	0%	18%	14%	68%	28	1.50	0.79
Using Hypercard as an authoring tool to create customized materials.	0%	4%	18%	18%	61%	28	1.64	0.91
Digitizing video into the computer.	0%	0%	0%	25%	75%	28	1.25	0.44
Internet and e-mail facilities.	0%	4%	21%	25%	50%	28	1.79	0.92
The rationale for integrating computer technology into foreign language instruction.	4%	4%	39%	43%	11%	28	2.46	0.88
The rationale for integrating computer technology into fiber-optic networked multi-sites.	0%	4%	25%	46%	25%	28	2.07	0.81
The difference between evaluation and assessment.	0%	4%	32%	54%	11%	28	2.29	0.71
AAT's professional standards for teacher evaluation.	0%	4%	21%	29%	46%	28	1.82	0.91
Issues in the development of National Standards.	4%	0%	18%	61%	18%	28	2.11	0.83
Assessing and evaluating students' progress.	0%	21%	68%	11%	0%	28	3.11	0.57
Using portfolio assessment in the classroom.	4%	0%	54%	21%	21%	28	2.43	0.96
Using portfolio assessment for your own professional development.	0%	11%	29%	39%	21%	28	2.29	0.94

Foreign Language Institute 1994

Pre-Assessment (continued)

Level of knowledge about . . .	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
The criteria used to assess students' portfolios.	0%	4%	25%	36%	36%	28	1.96	0.88
The differences between the use of a standardized test and portfolio assessment.	4%	4%	39%	32%	21%	28	2.36	0.99
Transforming textbook and workbook activities into communicative activities which focus on the four skills.	0%	21%	46%	25%	7%	28	2.82	0.86
Communicative and cooperative activities to be used on the fiber-optic network.	0%	4%	11%	39%	46%	28	1.71	0.81
Reading activities to be used on the fiber-optic network.	0%	0%	7%	25%	68%	28	1.39	0.63
Use of authentic materials on the fiber-optic network.	0%	0%	18%	21%	61%	28	1.57	0.79
The unique characteristics of interactive television.	0%	7%	21%	54%	18%	28	2.18	0.82
The components of an interactive television system.	0%	14%	18%	43%	25%	28	2.21	1.00
Rationale for using interactive technology to reach distant learners.	0%	14%	39%	29%	18%	28	2.50	0.96
Resources needed to use interactive television for distance education.	0%	14%	18%	39%	29%	28	2.18	1.02
Developing lessons to use over an interactive television system.	0%	0%	11%	39%	50%	28	1.61	0.69
Critical issues related to the use of interactive television for distance education.	0%	0%	18%	36%	46%	28	1.71	0.76

Post-Assessment

Level of knowledge about . . .	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
Basic text and graphics provided by Macintosh computer.	14%	43%	39%	4%	0%	28	3.68	0.77
Integrating text and graphics.	21%	36%	36%	0%	7%	28	3.64	1.06
Using sound recording software to create customized audio materials.	0%	11%	39%	29%	21%	28	2.39	0.96
Using Hypercard as an authoring tool to create customized materials.	7%	43%	39%	4%	7%	28	3.39	0.96
Digitizing video into the computer.	0%	11%	18%	21%	50%	28	1.89	1.07
Internet and e-mail facilities.	0%	21%	43%	21%	14%	28	2.71	0.98
The rationale for integrating computer technology into foreign language instruction.	14%	39%	43%	4%	0%	28	3.64	0.78
The rationale for integrating computer technology into fiber-optic networked multi-sites.	11%	32%	43%	11%	4%	28	3.36	0.95
The difference between evaluation and assessment.	0%	32%	50%	14%	4%	28	3.11	0.79
AAT's professional standards for teacher evaluation.	4%	32%	50%	14%	0%	28	3.25	0.75
Issues in the development of National Standards.	4%	36%	57%	4%	0%	28	3.39	0.63
Assessing and evaluating students' progress.	0%	57%	43%	0%	0%	28	3.57	0.50
Using portfolio assessment in the classroom.	14%	46%	39%	0%	0%	28	3.75	0.70
Using portfolio assessment for your own professional development.	14%	54%	29%	4%	0%	28	3.79	0.74

Post-Assessment(continued)

Level of knowledge about . . .	*5 - Extensive*	*4 - Quite a bit*	*3 -Some*	*2 - Very little*	*1 - None*	**Number of Responses**	**Mean**	**S.D.**
The criteria used to assess students' portfolios.	7%	29%	46%	18%	0%	28	3.25	0.84
The differences between the use of a standardized test and portfolio assessment.	14%	50%	36%	0%	0%	28	3.79	0.69
Transforming textbook and workbook activities into communicative activities which focus on the four skills.	4%	61%	32%	4%	0%	28	3.64	0.62
Communicative and cooperative activities to be used on the fiber-optic network.	7%	54%	39%	0%	0%	28	3.68	0.61
Reading activities to be used on the fiber-optic network.	4%	61%	29%	7%	0%	28	3.61	0.69
Use of authentic materials on the fiber-optic network.	4%	71%	25%	0%	0%	28	3.79	0.50
The unique characteristics of interactive television.	18%	57%	21%	4%	0%	28	3.89	0.74
The components of an interactive television system.	14%	57%	25%	4%	0%	28	3.82	0.72
Rationale for using interactive technology to reach distant learners.	11%	54%	29%	7%	0%	28	3.68	0.77
Resources needed to use interactive television for distance education.	7%	54%	32%	7%	0%	28	3.61	0.74
Developing lessons to use over an interactive television system.	7%	46%	36%	11%	0%	28	3.50	0.79
Critical issues related to the use of interactive television for distance education.	11%	46%	39%	4%	0%	28	3.64	0.73

Foreign Language Institute 1994

Evaluation

Institute Components	5 - Excellent	4 - Above average	3 -Average	2 - Below Average	1 - Poor	Number of Responses	Mean	S.D.
Institute registration process.	14%	31%	45%	3%	7%	29	3.41	1.02
Information received prior to the institute.	0%	24%	35%	31%	10%	29	2.72	0.96
Clarity of objectives.	21%	35%	35%	7%	3%	29	3.62	1.02
Effective use of time.	14%	45%	35%	7%	0%	29	3.66	0.81
Opportunity for participant interaction.	21%	59%	17%	3%	0%	29	3.97	0.73
Quality of materials used during the institute.	38%	41%	17%	3%	0%	29	4.14	0.83
Quality of institute speakers.	48%	52%	0%	0%	0%	29	4.48	0.51
Applicability of information.	45%	48%	3%	3%	0%	29	4.35	0.72
Organization of the institute.	14%	55%	31%	0%	0%	29	3.83	0.66
Information about computer facilitated foreign language instruction.	55%	41%	3%	0%	0%	29	4.52	0.57
Information about using interactive television in foreign language instruction.	17%	35%	31%	14%	3%	29	3.48	1.06
Information about National Standards for foreign language instruction.	14%	45%	41%	0%	0%	29	3.72	0.70
Information about portfolio assessment.	29%	29%	36%	7%	0%	28	3.79	0.96
Information about communicative activities in foreign language instruction.	7%	69%	17%	7%	0%	29	3.76	0.69
Demonstrations using an interactive system.	17%	35%	35%	10%	3%	29	3.52	1.02
Effectiveness of the institute leaders.	39%	43%	18%	0%	0%	28	4.21	0.74
Overall rating of the institute.	**24%**	**62%**	**14%**	**0%**	**0%**	**29**	**4.10**	**0.62**

Summary of Comments from 1994 Foreign Language Institute Evaluation

Topic of Comment	N
Which components were most useful to you	
Learning about computer technology (Hypercard and Internet)	22
Learning about/using the ICN	14
Information on assessment	7
Communicative lesson	5
Interacting/sharing with other teachers	5
Teaching examples	3
Information on National Standards for teachers	2
Everything	2
Provide suggestions for improving the institute	
More hands-on/practice time	14
More time for each session	7
More teaching examples	5
More interaction/sharing time	4
Better information prior to the institute	4
Different site for computer session	2
Show actual portfolio examples	2
Fewer days	1
Have participants choose which computer area they want to focus on	1
Equal pay	1
None	1

Table includes multiple responses from 25 of 29 participants

APPENDIX Q

Literacy Institutes

PRE-ASSESSMENT

Iowa Distance Education Alliance
Literacy Institute

Please write the last four digits of your social security number. ______________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your level of experience with distance learning using interactive television.
   1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 3 through 16.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

3. The elements of a positive literacy environment.
4. Obstacles to a positive literacy environment.
5. Infusing computer networking into the curriculum.
6. Incorporating creative drama.
7. Incorporating oral approaches to literature.
8. Alternative assessment approaches.
9. Advantages and disadvantages of alternative assessment approaches.
10. Star Schools and the Iowa Teacher Education Alliance.
11. Teaching strategies using interactive television.
12. Use of instructional resources in distance education.
13. Equipment used in interactive distance learning.
14. Applications of distance education to promote literacy.
15. National literacy issues and trends.
16. State literacy issues and trends.

For questions 17 through 20, use the scale below to rate your ability to do the following.
1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

17. Create a positive literacy environment.
18. Incorporate new methods and materials in a plan for distance learning.
19. Design and implement authentic assessment measures.
20. Operate the equipment used in a distance classroom.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER

NCS Trans-Optic® M10-6659 2019 A2804-8

21. Is there a distance education classroom using interactive television in your school?

1=yes *2=no* *3=don't know*

22. Have you attended one of the regional Interactive Television workshops presented by the Teacher Education Alliance?

1=yes *2=no*

23. If no, are you scheduled to attend one?

1=yes *2=no*

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

POST-ASSESSMENT

Iowa Distance Education Alliance
Literacy Institute

Please write the last four digits of your social security number. ______________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2 through 15.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. The elements of a positive literacy environment.
3. Obstacles to a positive literacy environment.
4. Infusing computer networking into the curriculum.
5. Incorporating creative drama.
6. Incorporating oral approaches to literature.
7. Alternative assessment approaches.
8. Advantages and disadvantages of alternative assessment approaches.
9. Star Schools and the Iowa Teacher Education Alliance.
10. Teaching strategies using interactive television.
11. Use of instructional resources ir [illegible] education.
12. Equipment used in interac[illegible]istance learning.
13. Applications of distance education to promote literacy.
14. National literacy issues and trends.
15. State literacy issues and trends.

For questions 16 through 19, use the scale below to rate your ability to do the following.

1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

16. Create a positive literacy environment.
17. Incorporate new methods and materials in a plan for distance learning.
18. Design and implement authentic assessment measures.
19. Operate the equipment used in a distance classroom.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

BEST COPY AVAILABLE

NCS Trans-Optic® M10-6659 18 A2804-8

EVALUATION

Iowa Distance Education Alliance
Literacy Institute

Please darken the appropriate circle with a #2 pencil. Use the following scale:

1=Poor 2=Below Average 3=Average 4=Above Average 5=Excellent

Please rate the following components:

1. Clarity of Institute objectives.
2. Organization of the Institute.
3. Effective use of time.
4. Opportunity for participant interaction.
5. Applicability of information.
6. Information about positive literacy environment.
7. Information about national and state literacy issues and trends.
8. Information about alternative assessment.
9. Information about using interactive television in distance education.
10. Information about infusing creative drama.
11. Information about infusing oral approaches to literature.
12. Information about infusing computer networking.
13. Demonstrations using an interactive system.
14. Effectiveness of the Institute leaders.
15. Overall rating of the Institute.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER --------------------->

NCS Trans-Optic® M10-6659 18 A2804-8

Indicate which components of the Institute were most useful to you and explain why.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Provide suggestions for improving the Institute.

PRE-ASSESSMENT

Iowa Distance Education Alliance
1994 Literacy Institute

Please write the last four digits of your social security number. ____________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your level of experience with distance learning using interactive television.
   1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

3. Is there a distance education classroom using interactive television in your school?
   1=yes *2=no* *3=don't know*

4. Have you attended one of the regional Interactive Television workshops presented by the Teacher Education Alliance (Bob Hardman workshop)?
   1=yes *2=no*

5. If no, are you scheduled to attend one?
   1=yes *2=no*

Use the following scale to indicate your level of knowledge about items 6 through 20.
1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

6. What other literacy teachers are doing to address diversity issues.
7. Communication issues involved in relating to various student populations.
8. Mass media and its role in literacy education.
9. The Teachers' Choice Program
10. New titles available in children's or adolescent literature.
11. Issues associated with integration of language arts across the curriculum.
12. How other literacy teachers are integrating language arts across the curriculum.
13. Technological innovations to enhance the teaching of literacy.
14. Designing lessons enhanced by visual or tactile approaches.
15. Censorship issues in literacy education.
16. Teaching strategies using interactive television.
17. Use of instructional resources in distance education.
18. Equipment used in interactive distance learning.
19. Applications of distance education to promote literacy.
20. National and state literacy issues and trends.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

297

NCS Trans-Optic® M10 6659 20 A2804-8

POST-ASSESSMENT

Iowa Distance Education Alliance
1994 Literacy Institute

Please write the last four digits of your social security number. ______________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2 through 16.
1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. What other literacy teachers are doing to address diversity issues.
3. Communication issues involved in relating to various student populations.
4. Mass media and its role in literacy education.
5. The Teachers' Choice Program
6. New titles available in children's or adolescent literature.
7. Issues associated with integration of language arts across the curriculum.
8. How other literacy teachers are integrating language arts across the curriculum.
9. Technological innovations to enhance the teaching of literacy.
10. Designing lessons enhanced by visual or tactile approaches.
11. Censorship issues in literacy education.
12. Teaching strategies using interactive television.
13. Use of instructional resources in distance education.
14. Equipment used in interactive distance learning.
15. Applications of distance education to promote literacy.
16. National and state literacy issues and trends.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

EVALUATION

Iowa Distance Education Alliance
1994 Literacy Institute

Please darken the appropriate circle with a #2 pencil. Use the following scale:

1=Poor *2=Below Average* *3=Average* *4=Above Average* *5=Excellent*

Please rate the following components:

			A	B	C	D	E	F	G	H	I	J
1.	Institute registration process.	1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2.	Information received prior to the institute.	2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3.	Clarity of Institute objectives.	3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4.	Effective use of time.	4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5.	Opportunity for participant interaction.	5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6.	Quality of materials used during the Institute.	6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7.	Quality of Institute speakers.	7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8.	Applicability of information.	8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9.	Organization of the Institute.	9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10.	Information about national and state literacy issues and trends.	10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11.	Information about using interactive television in distance education.	11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12.	Information about diversity issues.	12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13.	Teachers' Choice Program information.	13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14.	Information on integrating language arts across the curriculum.	14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15.	Information on enhancing lessons with visual or tactile approaches.	15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16.	Information on censorship issues in literacy education.	16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17.	Information about mass media and its role in literacy education.	17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18.	Demonstrations using an interactive system.	18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19.	Effectiveness of the Institute leaders.	19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20.	Overall rating of the Institute.	20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

299

OVER-------------------->

Indicate which components of the Institute were most useful to you and explain why.

Provide suggestions for improving the Institute.

A B C D E F G H I J
21 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
22 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
23 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
24 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
25 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
26 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
27 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
28 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
29 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
30 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
31 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
32 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
33 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
34 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
35 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
36 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
37 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
38 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
39 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪
A B C D E F G H I J
40 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪

Participant Information from 1993 Literacy Institute
Total Number of Participants = 30

Variable	Number	Percent
Sex		
Male	5	17%
Female	25	83%
Race		
Caucasian	28	93%
Unknown	2	7%
Occupation		
Teacher	29	97%
Other	1	3%
Educational Degree Held		
Bachelors	18	62%
Masters	11	38%
Teaching Level		
Elementary	4	14%
Middle/Junior High	3	10%
High School	19	68%
Elementary and Middle School	1	4%
Junior High and High School	1	4%
Subject Area		
Literacy	28	93%
Vocational Education	1	3%
Other	1	3%
Have a distance education classroom in their school		
Yes	15	50%
No	14	47%
Don't Know	1	3%
Taking the institute for graduate credit	7	23%
Taking the institute for Continuing Education Credit	6	20%
Attended an Interactive Television Workshop	9	30%
Scheduled to attend a Workshop	6	20%
Previously taught on interactive television	2	7%

AEA/Community College Region

I	3	10%
II	1	3%
III	0	0%
IV	3	10%
V	3	10%
VI	1	3%
VII	2	7%
IX	2	7%
X	2	7%
XI	3	10%
XII	2	7%
XIII	0	0%
XIV	5	17%
XV	2	7%
XVI	1	3%

Average number of years as an educator **15 years**

Indicate your level of experience with distance learning using interactive television.

	Number	Percent
None	18	60%
Very little	6	20%
Some	5	17%
Quite a bit	1	3%
Extensive	0	0%

Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

Pretest			Posttest	
N	%		N	%
1	3%	Much more effective	1	4%
7	24%	More effective	12	43%
13	45%	About the same	11	39%
8	28%	Less effective	4	14%
0	0%	Much less effective	0	0%

Pre-Assessment

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
The elements of a positive literacy environment.	13%	37%	33%	13%	3%	30	3.43	1.01
Obstacles to a positive literacy environment.	3%	43%	43%	10%	0%	30	3.40	0.72
Infusing computer networking into the curriculum.	3%	17%	37%	27%	17%	30	2.63	1.07
Incorporating creative drama.	7%	37%	27%	23%	7%	30	2.87	1.07
Incorporating oral approaches to literature.	13%	23%	37%	20%	7%	30	3.17	1.12
Alternative assessment approaches.	0%	43%	37%	17%	3%	30	3.20	0.85
Advantages and disadvantages of alternative assessment.	0%	30%	40%	23%	7%	30	2.93	0.91
Star Schools and the Teacher Education Alliance.	0%	13%	27%	40%	20%	30	2.33	0.96
Teaching strategies using interactive television.	0%	3%	17%	30%	50%	30	1.73	0.87
Use of instructional resources in distance education.	0%	3%	20%	33%	43%	30	1.83	0.87
Equipment used in interactive distance learning.	0%	7%	30%	27%	37%	30	2.07	0.98
Applications of distance education to promote literacy.	0%	3%	30%	37%	30%	30	2.07	0.87
National literacy issues and trends.	3%	27%	40%	23%	7%	30	2.97	0.96
State literacy issues and trends.	3%	7%	47%	40%	3%	30	2.67	0.80

1993 LITERACY INSTITUTE

Pre-Assessment (PART 2)

Rate ability	5=very adequate	4=adequate	3=unsure	2=inadequate	1=very inadequate	*Number of Responses*	*Mean*	*S.D.*
Create a positive literacy environment.	30%	47%	17%	7%	0%	30	4.00	0.87
Incorporate new methods and materials in a distance learning plan.	23%	20%	33%	17%	7%	30	3.37	1.22
Design and implement authentic assessment measures.	7%	57%	27%	7%	3%	30	3.57	0.56
Operate the equipment used in a distance classroom.	7%	20%	20%	30%	23%	30	2.57	1.25

1993 LITERACY INSTITUTE

Post-Assessment

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
The elements of a positive literacy environment.	32%	57%	11%	0%	0%	28	4.21	0.63
Obstacles to a positive literacy environment.	29%	46%	25%	0%	0%	28	4.04	0.74
Infusing computer networking into the curriculum.	21%	43%	32%	4%	0%	28	3.82	0.82
Incorporating creative drama.	43%	43%	14%	0%	0%	28	4.29	0.71
Incorporating oral approaches to literature.	39%	36%	25%	0%	0%	28	4.14	0.80
Alternative assessment approaches.	50%	39%	11%	0%	0%	28	4.39	0.69
Advantages and disadvantages of alternative assessment.	39%	50%	11%	0%	0%	28	4.29	0.66
Star Schools and the Teacher Education Alliance.	57%	39%	4%	0%	0%	28	4.54	0.58
Teaching strategies using interactive television.	39%	57%	4%	0%	0%	28	4.36	0.56
Use of instructional resources in distance education.	29%	46%	25%	0%	0%	28	4.04	0.74
Equipment used in interactive distance learning.	36%	54%	11%	0%	0%	28	4.25	0.65
Applications of distance education to promote literacy.	39%	46%	14%	0%	0%	28	4.25	0.70
National literacy issues and trends.	29%	61%	11%	0%	0%	28	4.18	0.61
State literacy issues and trends.	32%	61%	7%	0%	0%	28	4.25	0.59

Post-Assessment (PART 2)

Rate ability	5=very adequate	4=adequate	3=unsure	2=inadequate	1=very inadequate	Number of Responses	Mean	S.D.
Create a positive literacy environment.	52%	44%	4%	0%	0%	27	4.48	0.58
Incorporate new methods and materials in a distance learning plan.	36%	57%	7%	0%	0%	28	4.29	0.60
Design and implement authentic assessment measures.	43%	36%	21%	0%	0%	28	4.21	0.79
Operate the equipment used in a distance classroom.	32%	57%	7%	4%	0%	28	4.18	0.72

1993 LITERACY INSTITUTE

Evaluation

Institute Components	5 - Excellent	4 - Above average	3 -Average	2 - Below Average	1 - Poor	Number of Responses	Mean	S.D.
Clarity of objectives	54%	25%	14%	7%	0%	28	4.25	0.97
Organization of the institute	54%	36%	11%	0%	0%	28	4.43	0.69
Effective use of time	36%	46%	11%	7%	0%	28	4.11	0.88
Opportunity for participant interaction	64%	29%	7%	0%	0%	28	4.57	0.63
Applicability of information	39%	43%	14%	4%	0%	28	4.18	0.82
Information about positive literacy environment	64%	21%	11%	4%	0%	28	4.46	0.84
Information about national and state literacy issues and trends	61%	29%	11%	0%	0%	28	4.50	0.69
Information about alternative assessment	75%	18%	7%	0%	0%	28	4.68	0.61
Information about using interactive television in distance education	64%	29%	7%	0%	0%	28	4.57	0.63
Information about infusing creative drama	86%	7%	4%	4%	0%	28	4.75	0.70
Information about infusing oral approaches to literature	57%	25%	14%	4%	0%	28	4.36	0.87
Information about infusing computer networking	25%	29%	39%	4%	4%	28	3.68	1.02
Demonstrations using an interactive system	54%	36%	7%	4%	0%	28	4.39	0.79
Effectiveness of the institute leaders	79%	18%	4%	0%	0%	28	4.75	0.52
Overall rating of the institute	71%	14%	14%	0%	0%	28	4.57	0.74

Summary of Comments from 1993 Literacy Institute Evaluation

Topic of Comment	N
Which components were most useful to you	
Sharing with other teachers	9
Good speakers/presenters	8
Creative drama presentation	7
Topic of assessment	7
Using the equipment	6
Becoming more aware of technology uses	5
Oral interpretation topic	3
Children's literature presentation	3
Topic of state standards	3
Good facilities	1
The fact that the institute was paid for	1
Provide suggestions for improving the institute	
Better facilities/housing	4
More time for sharing	3
Better information prior to the institute	3
Add tracking options to meet variety of needs	3
No Internet	1
More experts	1
Teachers who have used the system	1
Pre-assess participants' knowledge levels	1
Include more administrators	1
More information on CD-ROM	1
Make the workshop a prerequisite	1
Shorten the institute	1

Table includes multiple responses from 22 of 30 participants

Participant Information from 1994 Literacy Institute
Total Number of Participants = 46

Variable	Number	Percent
Sex		
Male	7	15%
Female	39	85%
Race		
Caucasian	42	91%
No Response	4	9%
Occupation		
Teacher	39	85%
Curriculum Corrdinator	1	2%
Media Specialist	2	4%
Other	1	2%
No Response	3	7%
Educational Degree Held		
Bachelors	29	63%
Masters	12	26%
No Response	5	11%
Teaching Level		
Elementary	8	17%
Middle/Junior High	11	24%
High School	20	44%
Junior High and High School	5	11%
No Response	2	4%
Subject Area		
Literacy	42	91%
Foreign Language and Literacy	1	2%
No Response	3	7%
Have a distance education classroom in their school		
Yes	15	33%
No	30	65%
No Response	1	2%
Average number of years as an educator	*16 years*	*Range 1 to 34 years*
Taking the institute for graduate credit	14	30%
Attended an Interactive Television Workshop	10	22%
Scheduled to attend an ITV Workshop	4	9%
Attended a Curriculum Institute last summer	0	0%
Previously taught over an interactive system	5	11%

Region	Number	Percent
AEA/Community College Region		
I	6	13%
II	0	0%
III	7	16%
IV	0	0%
V	3	7%
VI	1	2%
VII	5	11%
IX	3	7%
X	2	4%
XI	7	15%
XII	2	4%
XIII	2	4%
XIV	5	11%
XV	2	4%
XVI	1	2%

Indicate your level of experience with distance learning using interactive television.

	Number*	Percent
None	17	38%
Very little	16	36%
Some	11	24%
Quite a bit	0	0%
Extensive	1	2%

* - 45 of 46 responded

Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

Pretest n=44			**Posttest** n=41	
N	%		N	%
0	0%	Much more effective	5	15%
7	16%	More effective	14	39%
19	43%	About the same	16	34%
17	39%	Less effective	6	12%
1	2%	Much less effective	0	0%

Summary of Comments from 1994 Literacy Institute Registration

Topic of Comment	**N**
Reason for wanting to participate in the institute	
Learn about ICN	19
Keep up-to-date	10
Learn new methods/techniques for teaching	10
Develop new/better curriculum	5
Share with other educators	4
Heard it was a valuable experience	4
Interested in literacy issues	3
Learn to use computers/technology in the classroom	2
Looks interesting	1
For graduate degree use	1

Table includes multiple responses from 41 of 46 participants

Literacy Institute 1994

Pre-Assessment

Level of knowledge about . . .	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
What other literacy teachers are doing to address diversity issues.	0%	4%	40%	40%	16%	45	2.33	0.80
Communication issues involved in relating to various student populations.	2%	9%	40%	36%	13%	45	2.51	0.92
Mass media and its role in literacy education.	2%	13%	56%	29%	0%	45	2.89	0.71
The Teachers' Choice Program.	0%	2%	4%	11%	82%	45	1.27	0.65
New titles available in children's or adolescent literature.	7%	27%	36%	27%	4%	45	3.04	1.00
Issues associated with integration of language arts across the curriculum.	7%	29%	40%	22%	2%	45	3.16	0.93
How other literacy teachers are integrating language arts across the curriculum.	0%	13%	51%	31%	4%	45	2.73	0.75
Technological innovations to enhance the teaching of literacy.	2%	13%	40%	42%	2%	45	2.71	0.82
Designing lessons enhanced by visual or tactile approaches.	2%	16%	33%	40%	9%	45	2.62	0.94
Censorship issues in literacy education.	0%	7%	38%	51%	4%	45	2.47	0.69
Teaching strategies using interactive television.	0%	9%	36%	36%	20%	45	2.33	0.91
Use of instructional resources in distance learning.	0%	7%	27%	49%	18%	45	2.22	0.82
Equipment used in interactive distance learning.	0%	9%	33%	44%	13%	45	2.38	0.83
Applications of distance education to promote literacy.	0%	2%	27%	51%	20%	45	2.11	0.75
National and state literacy issues and trends.	2%	4%	20%	60%	13%	45	2.22	0.82

Literacy Institute 1994

Post-Assessment

Level of knowledge about . . .	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
What other literacy teachers are doing to address diversity issues.	7%	47%	40%	7%	0%	43	3.54	0.74
Communication issues involved in relating to various student populations.	5%	51%	28%	16%	0%	43	3.44	0.83
Mass media and its role in literacy education.	12%	61%	26%	2%	0%	43	3.81	0.66
The Teachers' Choice Program.	21%	44%	28%	7%	0%	43	3.79	0.86
New titles available in children's or adolescent literature.	23%	54%	14%	7%	2%	43	3.88	0.93
Issues associated with integration of language arts across the curriculum.	21%	63%	14%	2%	0%	43	4.02	0.67
How other literacy teachers are integrating language arts across the curriculum.	19%	56%	21%	5%	0%	43	3.88	0.76
Technological innovations to enhance the teaching of literacy.	16%	63%	16%	5%	0%	43	3.91	0.72
Designing lessons enhanced by visual or tactile approaches.	14%	51%	33%	2%	0%	43	3.77	0.72
Censorship issues in literacy education.	23%	49%	19%	9%	0%	43	3.86	0.89
Teaching strategies using interactive television.	23%	58%	19%	0%	0%	43	4.05	0.65
Use of instructional resources in distance learning.	26%	42%	33%	0%	0%	43	3.93	0.77
Equipment used in interactive distance learning.	26%	54%	19%	2%	0%	43	4.02	0.74
Applications of distance education to promote literacy.	21%	56%	23%	0%	0%	43	3.98	0.67
National and state literacy issues and trends.	19%	51%	26%	5%	0%	43	3.84	0.79

Literacy Institute 1994

Evaluation

Institute Components	5 - Excellent	4 - Above Average	3 - Average	2 - Below Average	1 - Poor	Number of Responses	Mean	S.D.
Institute registration process.	38%	33%	20%	10%	0%	40	3.98	1.00
Information received prior to the institute.	18%	33%	40%	8%	2%	40	3.55	0.96
Clarity of objectives.	43%	38%	20%	0%	0%	40	4.23	0.77
Effective use of time.	38%	48%	10%	5%	0%	40	4.18	0.81
Opportunity for participant interaction.	55%	38%	8%	0%	0%	40	4.48	0.64
Quality of materials used during the institute.	53%	40%	8%	0%	0%	40	4.45	0.64
Quality of institute speakers.	50%	43%	8%	0%	0%	40	4.43	0.64
Applicability of information.	43%	40%	18%	0%	0%	40	4.25	0.74
Organization of the institute.	68%	23%	8%	2%	0%	40	4.55	0.75
Information about national and state literacy issues and trends.	38%	45%	18%	0%	0%	40	4.20	0.72
Information about using interactive television in distance education.	48%	40%	13%	0%	0%	40	4.35	0.70
Information about diversity issues.	48%	40%	10%	2%	0%	40	4.33	0.76
Teachers' Choice Program information.	43%	25%	28%	5%	0%	40	4.05	0.96
Information on integrating language arts across the curriculum.	23%	53%	23%	2%	0%	40	3.95	0.75
Information on enhancing lessons with visual or tactile approaches.	23%	50%	23%	5%	0%	40	3.90	0.81
Information on censorship issues in literacy education.	31%	56%	13%	0%	0%	39	4.18	0.64
Information about mass media and its role in literacy education.	33%	53%	15%	0%	0%	40	4.18	0.68
Demonstrations using an interactive system.	58%	28%	13%	2%	0%	40	4.40	0.81
Effectiveness of the institute leaders.	83%	15%	3%	0%	0%	40	4.80	0.46
Overall rating of the institute.	**60%**	**35%**	**5%**	**0%**	**0%**	**40**	**4.55**	**0.60**

Summary of Comments from 1994 Literacy Institute Evaluation

Topic of Comment	N
Which components were most useful to you	
Learning about/using the ICN	15
Interacting/sharing with other teachers	11
Speakers/presenters	9
E-mail	4
Media literacy	3
Integrate language arts across the curriculum	3
Book Talk session	2
Hands-on experience (general)	2
Effective use of time	2
Information on state policies	1
Diversity issues	1
Provide suggestions for improving the institute	
Do not schedule evenings/shorter days	12
More interaction/sharing time	4
Better information prior to the institute	3
Separate by grade level	2
De-emphasize social interaction	1
More hands-on/practice time	1
Decrease lodging expenses	1
Provide an advanced institute	1
Have only one site to avoid moving materials	1
More teaching examples	1

Table includes multiple responses from 27 of 46 participants

APPENDIX R

Vocational Education Institutes

PRE-ASSESSMENT

Iowa Distance Education Alliance
Vocational Education Institute

Please write the last four digits of your social security number. ______________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your level of experience with distance learning using interactive television.
   1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*
2. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*
3. Is there a distance education classroom using interactive television in your school?
   1=yes *2=no* *3=don't know*
4. Have you attended one of the regional Interactive Television workshops presented by the Teacher Education Alliance.
   1=yes *2=no*
5. If no, are you scheduled to attend one?
   1=yes *2=no*

Use the following scale to indicate your level of knowledge about items 6 through 16.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

6. Distance education.
7. Curriculum reform in vocational education.
8. The Iowa Vocational-Technical Education Program Management Guide.
9. Labor market information for Iowa.
10. Techniques for integrating academics and technology into vocational education.
11. Tech prep curriculum.
12. Workplace readiness curriculum.
13. Star Schools and the Iowa Teacher Education Alliance.
14. Creating teaching plans for interactive television.
15. Equipment used in interactive distance learning.
16. Applications of distance education to vocational education.

For questions 17 through 19, use the scale below to rate your ability to do the following.
1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

17. Use the Iowa Vocational-Technical Education Program Management Guide.
18. Evaluate mini-lessons taught via interactive television.
19. Operate the equipment used in a distance classroom.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

NCS Trans-Optic® M10-6659 2019 A2804-8

POST-ASSESSMENT

Iowa Distance Education Alliance
Vocational Education Institute

Please write the last four digits of your social security number. ______________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2 through 12.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. Distance education.
3. Curriculum reform in vocational education.
4. The Iowa Vocational-Technical Education Program Management Guide.
5. Labor market information for Iowa.
6. Techniques for integrating academics and technology into vocational education.
7. Tech prep curriculum.
8. Workplace readiness curriculum.
9. Star Schools and the Iowa Teacher Education Alliance.
10. Creating teaching plans for interactive television.
11. Equipment used in interactive distance learning.
12. Applications of distance education to vocational education.

For questions 13 through 15, use the scale below to rate your ability to do the following.
1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

13. Use the Iowa Vocational-Technical Education Program Management Guide.
14. Evaluate mini-lessons taught via interactive television.
15. Operate the equipment used in a distance classroom.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

EVALUATION

Iowa Distance Education Alliance
Vocational Education Institute

Please darken the appropriate circle with a #2 pencil. Use the following scale:

1=Poor *2=Below Average* *3=Average* *4=Above Average* *5=Excellent*

Please rate the following components:

1. Clarity of institute objectives.
2. Organization of the institute.
3. Effective use of time.
4. Opportunity for participant interaction.
5. Applicability of information.
6. Information about the Iowa's Star Schools Project .
7. Information about curriculum reform in Vocational Education.
8. How to use information about Iowa's labor market.
9. Information about Tech Prep curriculum.
10. Information about Workplace Readiness curriculum.
11. Information about how to use interactive technology.
12. Information about how to write an interactive teaching plan.
13. Information about how to use the Iowa Vocational-Technical Education Program Management Guides.
14. Information about the integration of academics and technology into vocational education.
15. Overall rating of the Institute.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

327

OVER ---------------------->

Indicate which components of the institute were most useful to you and explain why.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Provide suggestions for improving the institute.

PRE-ASSESSMENT

Iowa Distance Education Alliance
1994 Vocational Education Institute

Please write the last four digits of your social security number. ______________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your level of experience with distance learning using interactive television.
   1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*
2. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*
3. Is there a distance education classroom using interactive television in your school?
   1=yes *2=no* *3=don't know*
4. Have you attended one of the regional Interactive Television workshops presented by the Teacher Education Alliance?
   1=yes *2=no*
5. If no, are you scheduled to attend one?
   1=yes *2=no*

Use the following scale to indicate your level of knowledge about items 6 through 16.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

6. Distance education.
7. Curriculum reform in vocational education.
8. The Iowa Vocational Technical Education Program Management Guide CORE competencies.
9. Labor market information for Iowa.
10. Rationale for integrating academics and technology into vocational education.
11. Tech prep program.
12. Workplace readiness curriculum.
13. Star Schools and the Iowa Teacher Education Alliance.
14. Creating teaching plans for interactive television.
15. Equipment used in interactive distance learning.
16. Applications of distance education to vocational education.

For questions 17 through 19, use the scale below to rate your ability to do the following.
1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

17. Use the CORE competencies in the Iowa Vocational Technical Education Program Management Guide.
18. Evaluate mini-lessons taught via interactive television.
19. Operate the equipment used in a distance classroom.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

329

NCS Trans-Optic® M10-6659 20 A2804-8

POST-ASSESSMENT

Iowa Distance Education Alliance
1994 Vocational Education Institute

Please write the last four digits of your social security number. ______________

Please darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2 through 12.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. Distance education.
3. Curriculum reform in vocational education.
4. The Iowa Vocational Technical Education Program Management Guide CORE competencies.
5. Labor market information for Iowa.
6. Rationale for integrating academics and technology into vocational education.
7. Tech prep program.
8. Workplace readiness curriculum.
9. Star Schools and the Iowa Teacher Education Alliance.
10. Creating teaching plans for interactive television.
11. Equipment used in interactive distance learning.
12. Applications of distance education to vocational education.

For questions 13 through 15, use the scale below to rate your ability to do the following.
1=very inadequate *2=inadequate* *3=unsure* *4=adequate* *5=very adequate*

13. Use the CORE competencies in the Iowa Vocational Technical Education Program Management Guide.
14. Evaluate mini-lessons taught via interactive television.
15. Operate the equipment used in a distance classroom.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

NCS Trans-Optic® M10-6659 20 A2604-8

EVALUATION

Iowa Distance Education Alliance
1994 Vocational Education Institute

Please darken the appropriate circle with a #2 pencil. Use the following scale:

1=Poor *2=Below Average* *3=Average* *4=Above Average* *5=Excellent*

Please rate the following components:

1. Institute registration process.
2. Information received prior to the institute.
3. Clarity of institute objectives.
4. Organization of the institute.
5. Effective use of time.
6. Opportunity for participant interaction.
7. Quality of materials used during the institute.
8. Applicability of information.
9. Quality of institute speakers.
10. Information about the Iowa Star Schools Project .
11. Information about curriculum reform in Vocational Education.
12. Labor market information.
13. Information about the Tech Prep program.
14. Information about Workplace Readiness curriculum.
15. Information about how to use interactive technology.
16. Information about vocational CORE competencies.
17. Rationale for integrating academics and technology into vocational education.
18. Overall rating of the Institute.

Please rate items 19 and 20 using the following scale:

1=Very Unsatisfactory *3=Satisfactory* *5=Not Applicable*
2=Unsatisfactory *4=Very Satisfactory*

19. Use of the ICN to deliver the institute.

331

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER ------------->

Indicate which components of the institute were most useful to you and explain why.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Provide suggestions for improving the institute.

Participant Information from 1993 Vocational Institute
Total Number of Participants = 26

Variable	Number	Percent
Sex		
Male	15	58%
Female	11	42%
Race		
Caucasian	26	100%
Occupation		
Teacher	25	97%
Other	1	3%
Educational Degree Held		
Bachelors	15	60%
Masters	10	39%
Teaching Level		
Middle/Junior High	1	4%
High School	19	73%
Junior High and High School	6	23%
Subject Area		
Vocational Education	26	100%
Have a distance education classroom in their school		
Yes	11	42%
No	14	54%
Don't Know	1	4%
Taking the institute for graduate credit	7	27%
Taking the institute for Continuing Education Credit	4	15%
Attended an Interactive Television Workshop	8	31%
Scheduled to attend a Workshop	10	39%
Previously taught on interactive television	3	11%
Average number of years as an educator	**16 years**	

AEA/Community College Region

I	1	4%
II	1	4%
III	0	0%
IV	3	12%
V	3	12%
VI	1	4%
VII	0	0%
IX	0	0%
X	3	12%
XI	5	20%
XII	3	12%
XIII	1	4%
XIV	2	8%
XV	2	8%
XVI	1	4%

Indicate your level of experience with distance learning using interactive television.

	Number	Percent
None	16	62%
Very little	6	23%
Some	1	4%
Quite a bit	3	12%
Extensive	0	0%

Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

Pretest			Posttest	
N	%		N	%
0	0%	Much more effective	4	17%
2	8%	More effective	7	29%
9	36%	About the same	13	50%
13	52%	Less effective	1	4%
1	4%	Much less effective	0	0%

Pre-Assessment

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
Distance education.	0%	15%	31%	42%	12%	26	2.50	0.91
Curriculum reform in vocational education.	4%	39%	42%	15%	0%	26	3.31	0.79
Iowa Vocational-Technical Education Program Management Guide.	0%	15%	39%	27%	19%	26	2.50	0.99
Labor market information for Iowa.	0%	11%	46%	39%	4%	26	2.65	0.75
Techniques for integrating academics and technology into vocational education.	8%	15%	65%	8%	4%	26	3.15	0.83
Tech prep curriculum.	8%	15%	54%	19%	4%	26	3.04	0.92
Workplace readiness curriculum.	0%	0%	58%	31%	11%	26	2.46	0.71
Star Schools and the Iowa Teacher Education Alliance.	8%	0%	31%	54%	8%	26	2.46	0.95
Creating teaching plans for interactive television.	4%	0%	11%	27%	58%	26	1.65	0.98
Equipment used in interactive distance learning.	4%	4%	27%	27%	39%	26	2.08	1.09
Applications of distance education to vocational education.	0%	4%	8%	50%	39%	26	1.77	0.77

Pre-Assessment (PART 2)

Rate ability	*5=very adequate*	*4=adequate*	*3=unsure*	*2=inadequate*	*1=very inadequate*	*Number of Responses*	*Mean*	*S.D.*
Use the Iowa Vocational-Technical Education Program Management Guide.	0%	15%	46%	27%	11%	26	2.65	0.89
Evaluate mini-lessons taught via interactive television.	4%	27%	27%	31%	11%	26	2.81	1.10
Operate the equipment used in a distance classroom.	4%	23%	23%	27%	23%	26	2.58	1.21

Post-Assessment

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
Distance education.	12%	72%	16%	0%	0%	25	3.96	0.29
Curriculum reform in vocational education.	36%	56%	8%	0%	0%	25	4.28	0.38
Iowa Vocational-Technical Education Program Management Guide.	40%	56%	4%	0%	0%	25	4.36	0.32
Labor market information for Iowa.	28%	44%	28%	0%	0%	25	4.00	0.58
Techniques for integrating academics and technology into vocational education.	28%	40%	28%	4%	0%	25	3.96	0.87
Tech prep curriculum.	36%	44%	20%	0%	0%	25	4.16	0.56
Workplace readiness curriculum.	24%	44%	32%	0%	0%	25	3.92	0.58
Star Schools and the Iowa Teacher Education Alliance.	44%	52%	4%	0%	0%	25	4.40	0.33
Creating teaching plans for interactive television.	21%	54%	21%	4%	0%	24	3.92	0.60
Equipment used in interactive distance learning.	32%	48%	20%	0%	0%	25	4.12	0.53
Applications of distance education to vocational education.	25%	46%	29%	0%	0%	24	3.96	0.56

1993 VOCATIONAL EDUCATION INSTITUTE

Post-Assessment (PART 2)

Rate ability	5=very adequate	4=adequate	3=unsure	2=inadequate	1=very inadequate	Number of Responses	Mean	S.D.
Use the Iowa Vocational-Technical Education Program Management Guide.	32%	64%	4%	0%	0%	25	4.28	0.29
Evaluate mini-lessons taught via interactive television.	36%	52%	12%	0%	0%	25	4.24	0.44
Operate the equipment used in a distance classroom.	28%	48%	20%	4%	0%	25	4.00	0.67

1993 Vocational Education Institute

Evaluation

Institute Components	5 - Excellent	4 - Above average	3 -Average	2 - Below Average	1 - Poor	Number of Responses	Mean	S.D.
Clarity of institute objectives.	32%	48%	16%	0%	4%	25	4.04	0.87
Organization of the institute.	40%	40%	12%	8%	0%	25	4.12	0.86
Effective use of time.	28%	36%	24%	12%	0%	25	3.80	1.00
Opportunity for participant interaction.	64%	28%	4%	4%	0%	25	4.52	0.59
Applicability of information.	40%	40%	16%	4%	0%	25	4.16	0.72
Information about the Iowa Star Schools Project.	44%	48%	8%	0%	0%	25	4.36	0.41
Information about curriculum reform in Vocational Education.	40%	40%	16%	0%	4%	25	4.12	0.94
How to use information about Iowa's labor market.	24%	44%	28%	4%	0%	25	3.88	0.69
Information about Tech Prep curriculum.	48%	40%	8%	4%	0%	25	4.32	0.64
Information about Workplace Readiness curriculum.	28%	64%	8%	0%	0%	25	4.20	0.33
Information about how to use interactive technology.	44%	56%	0%	0%	0%	25	4.44	0.26
Information about how to write an interactive teaching plan.	28%	52%	20%	0%	0%	25	4.08	0.49
Information about how to use the Iowa Vocational-Technical Education Program Management Guides.	28%	44%	20%	8%	0%	25	3.92	0.83
Information about integration of academics and technology into vocational education.	40%	28%	28%	4%	0%	25	4.04	0.87
Overall rating of the institute.	46%	42%	13%	0%	0%	24	4.33	0.49

Summary of Comments from 1993 Vocational Education Institute Evaluation

Topic of Comment	N
Which components were most useful to you	
Using the equipment	17
Sharing with other teachers	5
Good speakers/presentations	4
Distance education techniques/uses	3
Star Schools information	2
Tech prep information	2
Program management information	2
Workplace readiness information	2
Ability to get graduate credit	1
Provide suggestions for improving the institute	
More time to use the equipment	9
Spend less time on curriculum	2
Adhere to the schedule	2
Using actual equipment	1
Separate topics of distance education and curriculum	1
Promote dorm life	1
Provide more computer time	1
Have participants use the system before curriculum topics	1
Mix the vocational areas	1
Provide better housing information	1
Have a brainstorming session on uses of distance education	1
More time for interaction	1

Table includes multiple responses from 22 of 26 participants

Participant Information from 1994 Vocational Education Institute
Total Number of Participants = 56

Variable	Number	Percent
Sex		
Male	26	46%
Female	30	54%
Race		
Caucasian	54	96%
No Response	2	4%
Occupation		
Teacher	51	91%
Curriculum Coordinator	3	5%
No Response	2	4%
Educational Degree Held		
Bachelors	33	59%
Masters	17	30%
No Response	6	11%
Teaching Level		
Middle/Junior High	3	5%
High School	35	63%
Junior High and High School	11	20%
K-12	1	2%
Postsecondary	1	2%
Postsecondary and High School	2	4%
No Response	3	5%
Subject Area		
Literacy	2	4%
Vocational Education	51	91%
Other	1	2%
No Response	2	4%
Have a distance education classroom in their school		
Yes	18	32%
No	34	61%
Don't Know	2	4%
No Response	2	4%
Average number of years as an educator	*17 years*	*Range 2 to 33 years*
Taking the institute for graduate credit	19	34%
Attended an Interactive Television Workshop	37	66%
Scheduled to attend an ITV Workshop	2	4%
Attended a Curriculum Institute last summer	2	4%
Previously taught over an interactive system	4	7%

Region	Number	Percent
AEA/Community College Region		
I	12	21%
II	1	2%
III	13	23%
IV	2	4%
V	3	5%
VI	3	5%
VII	0	0%
IX	3	5%
X	0	0%
XI	3	5%
XII	3	5%
XIII	3	5%
XIV	5	9%
XV	3	5%
XVI	2	4%

Indicate your level of experience with distance learning using interactive television.

	Number*	Percent
None	20	37%
Very little	19	35%
Some	11	20%
Quite a bit	4	7%
Extensive	0	0%

* - 54 of 55 responded

Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

Pretest n=54			**Posttest** n=54	
N	%		N	%
0	0%	Much more effective	1	2%
4	7%	More effective	9	17%
21	39%	About the same	19	35%
28	52%	Less effective	24	44%
1	2%	Much less effective	1	2%

Summary of Comments for 1994 Vocational Education Institute Registration

Topic of Comment	**N**
Reason for wanting to participate in the institute	
Keep up-to-date	14
Learn about Workplace Readiness curriculum and materials	11
Learn about ICN	11
Learn about Tech Prep	8
Learn about new curriculum changes	3
Learn new methods/techniques for teaching	3
For graduate degree use	1

Table includes multiple responses from 40 of 56 participants

Vocational Education Institute 1994

Pre-Assessment

Level of knowledge about . . .	5-Extensive	4-Quite a bit	3-Some	2-Very little	1-None	Number of Responses	Mean	S.D.
Distance education.	0%	9%	43%	43%	6%	54	2.56	0.74
Curriculum reform in vocational education.	0%	17%	60%	21%	2%	53	2.93	0.68
The Iowa Vocational Technical Education Program Management Guide CORE competencies.	2%	17%	26%	30%	26%	54	2.39	1.11
Labor market information for Iowa.	0%	4%	35%	41%	20%	54	2.22	0.82
Rationale for integrating academics and technology into vocational education.	4%	30%	48%	15%	4%	54	3.15	0.86
Tech prep program.	4%	30%	54%	11%	2%	54	3.22	0.77
Workplace readiness curriculum.	0%	6%	30%	57%	7%	54	2.33	0.70
Star Schools and the Iowa Teacher Education Alliance.	2%	2%	46%	41%	9%	54	2.46	0.77
Creating teaching plans for interactive television.	2%	0%	20%	33%	44%	54	1.82	0.89
Equipment used in interactive distance learning.	0%	6%	39%	41%	15%	54	2.35	0.81
Applications of distance education to vocational education.	0%	4%	28%	50%	19%	54	2.17	0.77

Ability to . . .	5-Very adequate	4-Adequate	3-Unsure	2-Inadequate	1-Very inadequate	Number of Responses	Mean	S.D.
Use the CORE competencies in the Iowa Vocational Technical Education Program Management Guide.	4%	18%	29%	29%	20%	49	2.57	1.14
Evaluate mini-lessons taught via interactive television.	0%	8%	42%	21%	29%	52	2.29	0.98
Operate the equipment used in a distance classroom.	2%	13%	30%	28%	28%	54	2.33	1.08

Vocational Education Institute 1994

Post-Assessment

Level of knowledge about . . .	5-Extensive	4-Quite a bit	3-Some	2-Very little	1-None	Number of Responses	Mean	S.D.
Distance education.	2%	47%	47%	4%	0%	55	3.47	0.60
Curriculum reform in vocational education.	6%	47%	40%	7%	0%	55	3.51	0.72
The Iowa Vocational Technical Education Program Management Guide CORE competencies.	4%	36%	36%	20%	4%	55	3.16	0.92
Labor market information for Iowa.	0%	27%	46%	26%	2%	55	2.98	0.78
Rationale for integrating academics and technology into vocational education.	7%	53%	35%	4%	2%	55	3.60	0.76
Tech prep program.	9%	38%	40%	11%	2%	55	3.42	0.88
Workplace readiness curriculum.	20%	56%	18%	6%	0%	55	3.91	0.78
Star Schools and the Iowa Teacher Education Alliance.	6%	44%	36%	13%	2%	55	3.38	0.85
Creating teaching plans for interactive television.	7%	44%	38%	7%	4%	55	3.44	0.88
Equipment used in interactive distance learning.	6%	51%	42%	2%	0%	55	3.60	0.63
Applications of distance education to vocational education.	2%	40%	53%	6%	0%	55	3.38	0.62

Ability to . . .	5-Very adequate	4-Adequate	3-Unsure	2-Inadequate	1-Very inadequate	Number of Responses	Mean	S.D.
Use the CORE competencies in the Iowa Vocational Technical Education Program Management Guide.	9%	28%	38%	13%	11%	53	3.11	1.12
Evaluate mini-lessons taught via interactive television.	6%	53%	35%	4%	4%	55	3.53	0.81
Operate the equipment used in a distance classroom.	9%	47%	35%	7%	2%	55	3.55	0.84

Vocational Education Institute 1994

Evaluation

Items	5-Excellent	4-Above Average	3-Average	2-Below Average	1-Poor	Number of Responses	Mean	S.D.
Institute registration process.	17%	25%	49%	8%	2%	53	3.47	0.93
Information received prior to the institute.	15%	34%	30%	13%	8%	53	3.36	1.13
Clarity of institute objectives.	11%	43%	26%	17%	2%	53	3.45	0.97
Organization of the institute.	19%	38%	21%	19%	4%	53	3.49	1.12
Effective use of time.	11%	32%	34%	15%	8%	53	3.25	1.09
Opportunity for participant interaction.	38%	36%	23%	2%	2%	53	4.06	0.93
Quality of materials used during the institute.	49%	38%	8%	6%	0%	53	4.30	0.85
Applicability of information.	28%	51%	15%	4%	2%	53	4.00	0.88
Quality of institute speakers.	17%	42%	25%	11%	6%	53	3.53	1.09
Information about the Iowa Star Schools Project.	8%	30%	42%	19%	2%	53	3.23	0.91
Information about curriculum reform in Vocational Education.	4%	30%	49%	15%	2%	53	3.19	0.81
Labor market information.	6%	19%	47%	21%	8%	53	2.94	0.97
Information about the Tech Prep program.	4%	21%	51%	15%	9%	53	2.94	0.95
Information about Workplace Readiness curriculum.	43%	42%	9%	4%	2%	53	4.21	0.91
Information about how to use interactive technology.	28%	40%	30%	2%	0%	53	3.94	0.82
Information about vocational CORE competencies.	0%	23%	53%	17%	8%	53	2.91	0.84
Rationale for integrating academics and technology into vocational education.	11%	36%	43%	8%	2%	53	3.47	0.87
Overall rating for the institute.	**19%**	**45%**	**21%**	**13%**	**2%**	**53**	**3.66**	**1.00**

Vocational Education Institute 1994

Evaluation (continued)

Items	4 - Very Satisfactory	3 - Satisfactory	2 - Unsatisfactory	1 - Very Unsatisfactory	Number of Responses	Mean	S.D.
Use of the ICN to deliver the institute.	68%	26%	0%	6%	47	3.55	0.80
Number of remote sites involved.	42%	46%	8%	4%	50	3.26	0.78

Vocational Education Institute 1994

Comparison of evaluations by site using one-way analysis of variance

Items	Mean Waukon (W) (N = 16)	Mean Boone (B) (N = 24)	Mean Emmetsburg (E) (N = 13)	Difference
Institute registration process.	3.19	3.63	3.54	
Information received prior to the institute.	3.13	3.63	3.15	
Clarity of institute objectives.	3.69	3.79	2.54	W, B > E
Organization of the institute.	4.06	3.88	2.08	W, B > E
Effective use of time.	3.75	3.63	1.92	W, B > E
Opportunity for participant interaction.	4.44	4.29	3.15	W, B > E
Quality of materials used during the institute.	4.63	4.46	3.62	W, B > E
Applicability of information.	4.31	4.25	3.15	W, B > E
Quality of institute speakers.	3.75	4.08	2.23	W, B > E
Information about the Iowa Star Schools Project.	3.50	3.54	2.31	W, B > E
Information about curriculum reform in Vocational Education.	3.50	3.46	2.31	W, B > E
Labor market information.	2.94	3.25	2.38	B > E
Information about the Tech Prep program.	3.31	2.96	2.46	W, B > E
Information about Workplace Readiness curriculum.	4.38	4.54	3.38	W, B > E
Information about how to use interactive technology.	4.19	4.08	3.38	W, B > E
Information about vocational CORE competencies.	3.13	3.08	2.31	W, B > E
Rationale for integrating academics and technology into vocational education.	3.81	3.54	2.92	W > E
Overall rating for the institute.	4.13	4.04	2.38	W, B > E
Use of the ICN to deliver the institute. *	3.60	3.55	3.50	
Number of remote sites involved. *	3.19	3.43	3.08	

scale: 1 = poor, 2 = below average, 3 = average, 4 = above average, 5 = excellent

* scale: 1 = very unsatisfactory, 2 = unsatisfactory, 3 = satisfactory, 4 = very satisfactory

Summary of Comments from 1994 Vocational Education Institute Evaluation

Topic of Comment	N
Which components were most useful to you	
Workplace readiness materials	11
Teaching examples	11
Learning about/using the ICN	9
Speakers/presenters	4
Interacting/sharing with other teachers	4
Good site facilitator(s)	2
Curriculum reform information	1
Provide suggestions for improving the institute	
More hands-on/practice time	4
None	4
Explain how to use the system the first day	3
Make sure presenters know how to use the system	2
Go through all of the materials	2
More interaction/sharing time	2
Better information prior to the institute	2
Fewer speakers	2
More on workplace readiness	2
Information on student reactions to ICN	1
Handout on equipment use for future reference	1
Better on-site facilitation	1
Information on tech prep	1
Better organization	1
Less theory/rationale	1
More teaching examples	1

Table includes multiple responses from 26 of 56 participants

APPENDIX S

General Session
Institute

Iowa Distance Education Alliance
General Curriculum Institute Survey
June 13-14, 1994

Please darken the appropriate circle with a #2 pencil.

1. I am *1=male* *2=female*
2. My ethnic origin is *1=Caucasian* *2=Black American* *3=Asian/Pacific Islander* *4=Hispanic* *5=Native American* *6=Other*
3. My occupation is
   1=K-12 teacher *2=K-12 administrator* *3=AEA staff member*
   4=Community college instructor *5=Other*
4. Have you attended or are you scheduled to attend a 1994 three-day content area institute (five days for Foreign Language) offered by the Teacher Education Alliance?
   1=yes *2=no*
5. Are you taking this institute for university credit?
   1=yes *2=no* *3=unsure*

Use the following scale to indicate your level of satisfaction with items 5 through 20 as related to the two-day general curriculum institute (June 13-14).

1 = very unsatisfactory
2 = unsatisfactory
3 = satisfactory
4 = very satisfactory

6. Registration process.
7. Information received prior to the general institute.
8. Clarity of objectives.
9. Effective use of time.
10. Opportunity for participant interaction.
11. Applicability of the information.
12. Quality of the speakers.
13. Usefulness of the teaching strategies shown on videotape.
14. Quality of the materials used during the institute.
15. Usefulness of the information.
16. Use of the ICN to deliver the instruction.
17. Number of remote sites used for the institute.
18. Including all curriculum areas in a general session.
19. Organization of the institute.
20. Overall satisfaction with the institute.

OVER ---------->

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

NCS Trans Optic® M10 6659 20 A2804-8

Describe what you liked best about the two-day general curriculum institute.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Provide suggestions for improving the institute.

362

Participant Information from the General Curriculum Institute

June 13-14, 1994

Total Number of Participants = 269

Variable	Number	Percent
Sex		
Male	82	30%
Female	187	70%
Race		
Caucasian	263	98%
Black American	2	1%
Native American	3	1%
Occupation		
K-12 Teacher	249	93%
K-12 Administrator	4	1%
AEA Staff	5	2%
Community College Instructor	3	1%
Other	8	3%
Educational Degree Held		
Bachelors	140	60%
Masters	73	31%
Education Specialist	4	2%
Doctorate	1	1%
No Response	17	7%
Teaching Level		
Elementary	51	22%
Middle/Junior High	34	15%
High School	99	42%
Elementary and Middle	4	2%
Junior High and High School	27	12%
Postsecondary	5	2%
Postsecondary and High School	1	1%
No Response	8	3%
Subject Area		
Mathematics	36	15%
Science	40	17%
Foreign Language	20	9%
Literacy	37	16%
Vocational Education	36	15%
Mathematics and Science	15	6%
Foreign Language and Literacy	1	1%
All Elementary Subjects	38	16%
Other	3	1%
No Response	9	4%
Average number of years as an educator	*16 years*	*Range 1 to 36 years*
Attended or scheduled to attend a 1994 content area institute offered by the TEA	229	86%
Taking the institute for graduate credit	60	22%

Variable	Number	Percent
Site attended		
Manchester	16	6%
New Hampton	13	5%
Mason City	16	6%
Emmetsburg	25	9%
Sheldon	23	9%
Jefferson	16	6%
Pocahontas	7	3%
Iowa Falls	8	3%
Waterloo	17	6%
Bettendorf	19	7%
Guthrie Center	8	3%
Johnston	26	10%
Denison	4	2%
Sioux City	15	6%
Harlan	9	3%
Sidney	9	3%
Osceola	15	6%
Centerville	6	2%
Sigourney	6	2%
Wapello	4	2%
Mt. Pleasant	7	3%

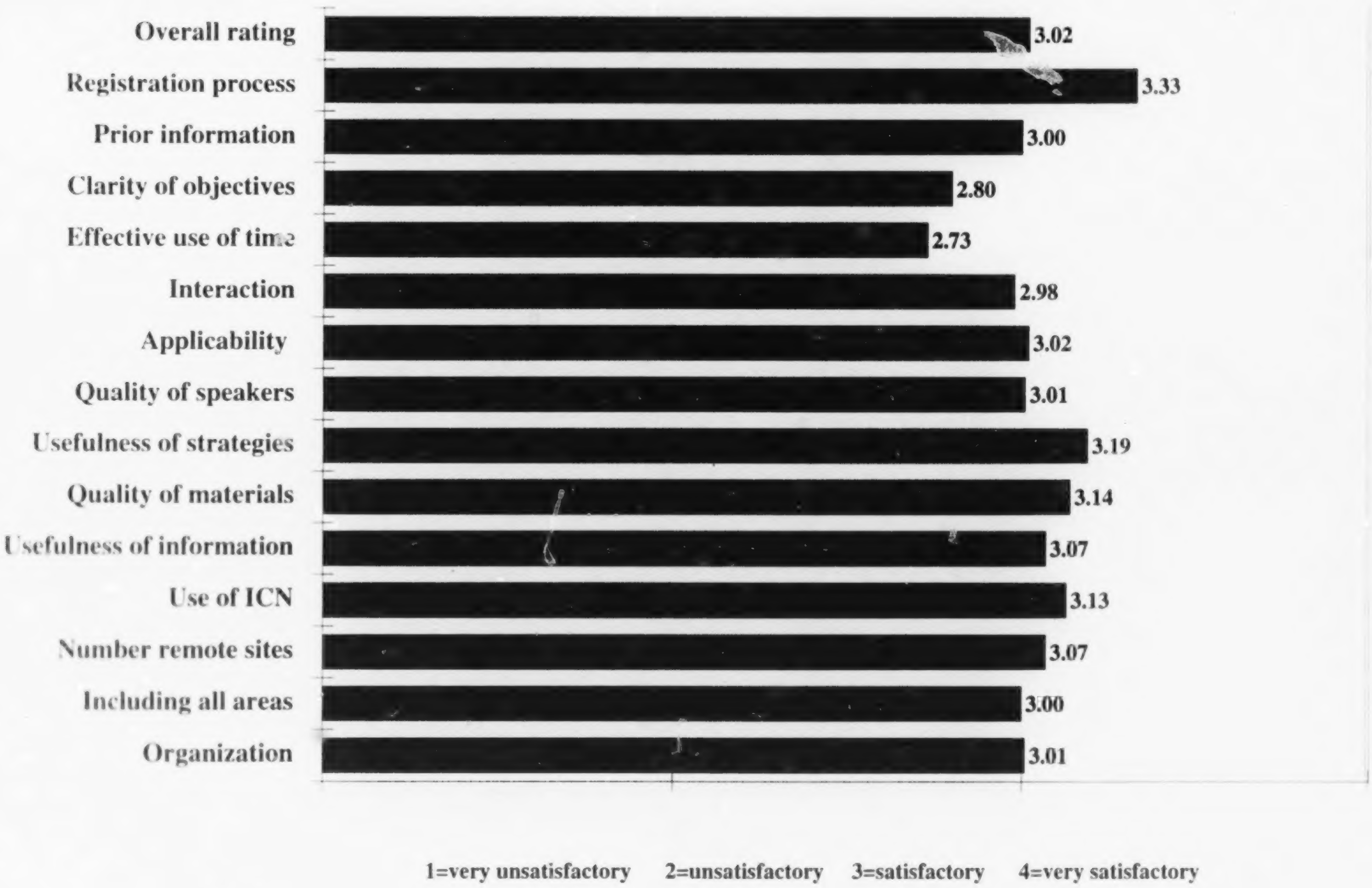
Region	Number	Percent
AEA/Community College Region		
I	24	10%
II	15	6%
III	21	9%
IV	27	12%
V	26	11%
VI	9	4%
VII	11	5%
IX	10	4%
X	11	5%
XI	29	12%
XII	14	6%
XIII	1	1%
XIV	16	7%
XV	10	4%
XVI	11	5%

General Curriculum Institute **June 13-14, 1994**

Institute Evaluation

Institute Components	4 - Very Satisfactory	3 - Satisfactory	2 - Unsatisfactory	1 - Very Unsatisfactory	Number of Responses	Mean	S.D.
Registration process	42%	51%	5%	2%	267	3.33	0.66
Information received prior to the general institute	28%	49%	17%	6%	268	3.00	0.82
Clarity of objectives	15%	56%	24%	5%	268	2.80	0.75
Effective use of time	13%	53%	29%	5%	269	2.73	0.75
Opportunity for participant interaction	22%	57%	17%	4%	268	2.98	0.74
Applicability of information	19%	65%	14%	2%	269	3.02	0.64
Quality of the speakers	18%	67%	13%	2%	268	3.01	0.63
Usefulness of teaching strategies shown on videotape	28%	64%	9%	0%	269	3.19	0.58
Quality of materials used during the institute	24%	67%	8%	1%	267	3.14	0.59
Usefulness of the information	21%	65%	14%	0%	269	3.07	0.59
Use of the 'CN to deliver the instruction	28%	58%	15%	0%	268	3.13	0.64
Number of remote sites used for the institute	27%	57%	14%	3%	268	3.07	0.71
Including all curriculum areas in a general session	22%	60%	16%	3%	269	3.00	0.70
Organization of the institute	23%	60%	13%	5%	269	3.01	0.73
Overall satisfaction with the institute	20%	64%	14%	2%	268	3.02	0.65

General Curriculum Institute Ratings



Summary of Categorized Comments from 1994 General Institute Evaluation

Topic of Comment	N
Describe what you liked best about the two-day general curriculum institute	
Teaching examples	87
Interacting/sharing with other teachers	62
Learning about/using the ICN	47
Good speakers	23
Session on assessment	20
Session on use of resource persons	18
Good site facilitation	15
Session on student collected data	14
Amenities (food, room, etc.)	12
Good organization	9
Session on Internet	8
Session on project based learning	6
Session on educational games	4
Less travel/convenient location	4
Session on Excellence in Iowa Education	3
Stipends	2
Second day	2
Provide suggestions for improving the institute	
Better speakers	36
Better information prior to the institute	29
Better organization	29
Make sure presenters know how to use the system	28
Teaching examples for all levels/groups	26
More interaction/sharing time	24
Pre-test system to avoid technical problems	19
Fewer sites	12
Air conditioning	10
Time issues (more breaks, later start times, etc.)	8
More ICN information	8
Better follow-up plan	8
Participant accountability	7
Better on-site facilitation	7
More for elementary level	6
More hands-on/practice time	5
More Internet information	3
More specific examples	3
Sites in all areas	3
Separate institute for those who attended a workshop	2
Better/consistent stipends	2
Include student/administrator opinions	1
Have General session first	1
Have fully equipped rooms	1

Table includes multiple responses from 212 of 269 participants

APPENDIX T

Inservice Workshops

Iowa Distance Education Alliance
Distance Education Workshop Participant Information

Name:

Work Position:

Home Address:

Work Address:

Home Telephone:

Work Telephone:

Social Security Number:

AEA Number:

Male _____ Female _____

Caucasian _____ Black _____ Hispanic _____
Asian/Pacific Islander _____ Native American _____

Years as an educator:

Highest Degree Held:

Level of Teaching: Elementary _____ Middle _____ Secondary _____ Post-Secondary _____

Subject Area: Mathematics _____ Science _____ Foreign Language _____
Literacy _____ Vocational Education _____ Other _____

Other Teacher Education Alliance Activities

Have you participated in other training activities offered through the Iowa Star Schools project?

_____ No _____ Yes (indicate which activities)________________________________

Are you taking this workshop for graduate credit? Yes _____ No _____

If yes, from which Institution? U of I _____ UNI _____ ISU _____

Interactive Television Teaching Experience

Have you ever taught over an interactive television system? Yes _____ No _____

If yes, name the institution and state in which the system was located.__________________

With what grade level of student did you work? ______________

How many years have you taught over an interactive television system? __________

Interactive Television Training

Have you ever participated in interactive television training? Yes _____ No _____

Where? ____

How many hours of training did you receive? ____________

PRE-ASSESSMENT

Iowa Distance Education Alliance
Interactive Television Workshop

Please darken the appropriate circle with a #2 pencil.

1. Is there a distance education classroom using interactive television in your school?
   1=yes   *2=no*   *3=don't know*

2. Indicate your level of experience with distance learning using interactive television.
   1=no experience   *2=very little*   *3=some*   *4=quite a bit*   *5=extensive*

3. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.
   1=much less effective   *2=less effective*   *3=about the same*   *4=more effective*   *5=much more effective*

Use the following scale to indicate your level of knowledge about items 4 through 14.

1=none   *2=very little*   *3=some*   *4=quite a bit*   *5=extensive*

4. The unique characteristics of interactive television.
5. The components of an interactive television system.
6. The rationale for using interactive technology to reach the distant learner.
7. The resources needed to use interactive television for distance education.
8. Successful teaching strategies used with interactive television.
9. Operation of equipment typically used in interactive television classrooms.
10. Strategies for evaluating interactive television instruction.
11. Research findings related to the use of interactive television for distance education.
12. Critical issues related to the use of interactive television for distance education.

Briefly describe how you feel about the use of interactive television for teaching and how you envision your school using interactive television to provide programs and services for your students. Use the back of this sheet if you need more space.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

NCS Trans-Optic™ [illegible]

POST-ASSESSMENT

Iowa Distance Education Alliance
Interactive Television Workshop

Please darken the appropriate circle with a #2 pencil.

1. Indicate your feelings about the effectiveness of interactive television for teaching compared to traditional instruction.

1=much less effective *2=less effective* *3=about the same* *4=more effective* *5=much more effective*

Use the following scale to indicate your level of knowledge about items 2 through 12.

1=none *2=very little* *3=some* *4=quite a bit* *5=extensive*

2. The unique characteristics of interactive television.
3. The components of an interactive television system.
4. The rationale for using interactive technology to reach the distant learner.
5. The resources needed to use interactive television for distance education.
6. Successful teaching strategies used with interactive television.
7. Operation of equipment typically used in interactive television classrooms.
8. Strategies for evaluating interactive television instruction.
9. Research findings related to the use of interactive television for distance education.
10. Critical issues related to the use of interactive television for distance education.

Please comment on the greatest benefit of an interactive television system for your school in the space below.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER-------->

NCS Trans-Optic™ M10-6659 2019 A2804-8

Please comment on the greatest challenge to teaching on an interactive television system.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Describe how your school will need to adapt to successfully integrate an Interactive Television (ITV) system into its program and how you envision your school using an ITV system to provide programs and services for your students.

EVALUATION

Iowa Distance Education Alliance
Interactive Television Workshop

Please darken the appropriate circle with a #2 pencil. Use the following scale:

1= Poor *2=Below Average* *3=Average* *4=Above Average* *5=Excellent*

Please rate the following workshop components:

1. Clarity of objectives.
2. Effective use of time.
3. Opportunity for participant interaction.
4. Applicability of information.
5. Organization of workshop content.
6. Information concerning critical issues in distance teaching.
7. Information about teaching/learning strategies.
8. Information about evaluation components for delivering instruction via interactive television.
9. Information about interactive technology (e.g. resources, system components, operation of equipment).
10. Overall workshop rating.

	A	B	C	D	E	F	G	H	I	J
1	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
4	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
9	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
15	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
19	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

OVER------------->

NCS Trans Optic® M10 6659 2019 A2804 8

Indicate which components of the workshop were most useful to you and explain why.

	A	B	C	D	E	F	G	H	I	J
21	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
24	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
27	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
31	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
32	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
33	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
34	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
35	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
36	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
37	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
38	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
39	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
40	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪

Provide suggestions for improving the workshop.

Participant Information from Workshops*
633 Participants

Variable	Number	Percent
Sex		
Male	282	44%
Female	340	54%
No Response	11	2%
Occupation		
Teacher	377	60%
Administrator	27	4%
Curriculum Coordinator	10	2%
Media Specialist	55	9%
Guidance Counselor	4	1%
AEA Consultant	57	9%
College Faculty	68	11%
Other	35	5%
Educational Degree Held		
Bachelors	268	42%
Masters	302	48%
Other	45	7%
No Response	18	3%
Teaching Level		
Elementary	59	9%
Elementary /Middle School	20	3%
Middle/Junior High	43	7%
High School	286	45%
Junior High and High School	38	6%
K-12	37	6%
High School/Postsecondary	25	4%
Postsecondary	84	13%
No Response	41	6%
Subject Area		
Foreign Language	39	6%
Mathematics	94	15%
Science	78	12%
Literacy	79	13%
Vocational Ed	74	12%
Media	59	9%
Math and Science	44	7%
Foreign Language and Literacy	9	1%
All elementary subjects	28	4%
Other	95	15%
No Response	34	5%
Previously taught on interactive television	58	9%
Year attended a workshop		
Year One	344	54%
Year Two	289	46%
Average number of years as an educator	*18 years*	*Range 1 year to 45 years*

* *Does not include data from all workshops.*
Table includes information from participants in 31 of 38 workshops.

AEA/Community College Region	*Number from regions attending workshops*	*Percent of total*
I	48	8%
II	50	8%
III	27	4%
IV	23	4%
V	51	8%
VI	47	7%
VII	84	13%
IX	22	4%
X	37	6%
XI	47	7%
XII	31	5%
XIII	43	7%
XIV	23	4%
XV	79	13%
XVI	21	3%

Workshop Pre-Assessment

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
Unique characteristics of interactive television	1%	12%	26%	36%	25%	339	2.29	1.01
Components of an interactive television system	2%	10%	26%	33%	30%	340	2.21	1.03
Rationale for using interactive technology for distant learners	2%	19%	42%	26%	11%	340	2.76	0.95
Resources needed to use interactive technology	2%	9%	30%	32%	27%	339	2.26	1.01
Successful teaching strategies used with interactive television	0%	4%	24%	37%	35%	340	1.96	0.86
Operation of equipment used in interactive television classroom	2%	5%	20%	26%	47%	340	1.89	1.03
Developing lessons to use over an interactive system	1%	1%	19%	30%	49%	340	1.76	0.88
Strategies for evaluating system components of distance education	0%	1%	9%	28%	62%	340	1.49	0.73
Strategies for evaluating teaching using interactive television	0%	2%	11%	27%	59%	340	1.58	0.80
Research findings related to the use of interactive television	0%	2%	12%	26%	60%	340	1.55	0.77
Critical issues related to the use of interactive television	0%	3%	17%	33%	48%	337	1.75	0.84

Summary of Comments from Workshop Pre-Assessments

Topic of Comment	N
How do you feel about interactive television	
Excited about the opportunities it offers	56
Very uninformed	25
Undecided/mixed feelings	23
Provides opportunities for learners	19
An effective teaching tool	17
Prefer one-on-one contact with students	13
Reservations about its use in some courses	11
Costs too much	10
Afraid it will replace teachers	10
Cost effective way to deliver courses	9
Need to expose students to technology	6
Anxious to try it	6
Concerned about logistics/scheduling	6
Need to be open-minded	5
Skeptical	5
Concerned about additional work for teachers	5
Too many technical difficulties	4
Not yet connected	4
Curious	3
Cost and time will keep teachers from using it	3
Concerned about monitoring	3
Teacher and administrative vision for use does not match	3
Restricts presentation methods	3
Need training and coordination to realize potential	2
Help meet underserved needs	2
Raise academic standards	2
Interested in technical aspects	1
Needs to be accepted before it is used	1
More research is needed on its effectiveness	1
Negative feelings	1
May keep schools open that should not remain open	1
It is the future in education	1
Improved visual quality over previous systems	1

Table includes multiple responses from 298 of 340 respondents

Summary of Comments from Workshop Pre-Assessments

Topic of Comment	N
How do you envision using interactive television	
Broaden the curriculum/provide access to more classes	71
Help small/rural school districts	38
Provide advanced classes/TAG/AP	28
Provide college/adult classes	27
Provide workshops/inservice for teachers	26
Allow students to talk with experts	17
Sharing among schools	12
Course enrichment	11
Provide resources/information	9
Provide peer sharing for students	7
Teacher networking	7
Allow teacher sharing among districts	5
Provide graduate classes	5
Data transfer/information access	5
Offer courses to meet state curricular requirements(enrollment)	3
Link small schools with larger schools	3
Brings latest technology to schools	2
Other than education uses	2
Links schools and the community	1
Teacher/course evaluation improvement	1

Table includes multiple responses from 298 of 340 respondents

Workshop Post-Assessment

Indicate level of knowledge	5 - Extensive	4 - Quite a bit	3 -Some	2 - Very little	1 - None	Number of Responses	Mean	S.D.
Unique characteristics of interactive television	13%	76%	12%	0%	0%	294	4.01	0.49
Components of an interactive television system	18%	68%	14%	0%	0%	294	4.03	0.58
Rationale for using interactive technology for distant learners	25%	67%	8%	0%	0%	295	4.17	0.56
Resources needed to use interactive technology	17%	67%	15%	0%	0%	294	4.01	0.58
Successful teaching strategies used with interactive television	18%	58%	24%	1%	0%	295	3.92	0.67
Operation of equipment used in interactive television classroom	17%	55%	28%	0%	0%	295	3.89	0.67
Developing lessons to use over an interactive system	9%	54%	33%	4%	0%	295	3.68	0.69
Strategies for evaluating system components of distance education	5%	39%	51%	4%	0%	295	3.45	0.68
Strategies for evaluating teaching using interactive television	6%	43%	47%	4%	0%	295	3.52	0.67
Research findings related to the use of interactive television	4%	31%	51%	12%	1%	295	3.26	0.77
Critical issues related to the use of interactive television	25%	54%	21%	1%	0%	286	4.02	0.70

Summary of Comments from Workshop Post-Assessments

Topic of Comment	N
Greatest benefit of using interactive television	
Expanded course offerings	90
Opportunities for teacher inservice/workshops	24
College credit classes/continuing education	19
Can reach more students with technology	20
Can use for course enrichment	16
Enhance communication/sharing between schools	16
More high level classes/TAG/AP	14
Can use for networking/conferencing for teachers	8
More opportunities for small/rural schools	7
Opportunities for students to interact with other students	6
Data networking	6
Expand resources	6
Increased opportunities for community	4
Teacher sharing between schools	3
Can improve learning	3
Staff development	3
Less travel and expense	2
Access to experts	2
Equal access to education	1
New way to transform education	1
Community College classes	1
Greatest challenge of using interactive television	
More time required for preparation	66
Mastery of the equipment/technology	57
Interacting with remote students and keeping them involved	34
Coordination and scheduling	20
Meeting individual student needs	17
Costs	16
Adapting the curriculum	16
Getting teachers to accept and use the system	15
Administrative resistance	11
Organization	9
The need for facilities and equipment	8
Managing more than one site	8
Maintaining a personal atmosphere	7
Working with the facilitator	6
Class control	6
Transferring materials	3
Creativity	2
Policies/procedures	2
Clerical issues	1
Keeping the system from being abused by special interests	1

Table includes multiple responses from 231 of 295 respondents

Summary of Comments from Workshop Post-Assessments

Topic of Comment	N
How will your school need to adapt to use interactive television	
Schedules will need to be adapted/more flexible	42
There will need to be money to support the program	21
A classroom must be provided	20
There must be leadership/commitment	18
Compensation for teachers must be determined	13
Staff will need to be trained	21
The school needs to be connected to the ICN	14
Public relations/promotion is necessary	12
Guidelines need to be developed	11
More cooperation	9
Need flexibility to deal with individual students	3
Teachers must be involved in decisions	2
Must overcome resistance	5
Need to find out what is available	1
Develop ways to use remote sites	1
Realize unique qualities and limitations	1
Find personnel to act as facilitators	1
How do you think your school will use interactive television	
To expand the curriculum	21
To enrich learning opportunities for students	16
To provide college courses/adult education	8
To provide teacher inservice	7
For AP/TAG classes	7
For staff sharing between schools	7
Use in every facet of education	3
Teacher networking	3
Difference in teacher/administration visions for use	2
For advanced degree courses	1
To connect students	1
Political and other gains (money)	1
Eliminate teacher positions	1

Table includes multiple responses from 231 of 295 respondents

Workshop Evaluation

Workshop Components	5 - Excellent	4 - Above average	3 -Average	2 - Below Average	1 - Poor	Number of Responses	Mean	S.D.
Clarity of objectives	71%	28%	2%	0%	0%	302	4.69	0.50
Effective use of time	59%	36%	4%	0%	0%	302	4.53	0.63
Opportunity for participant interaction	86%	13%	1%	0%	0%	302	4.85	0.39
Applicability of information	71%	28%	1%	0%	0%	301	4.69	0.49
Organization of workshop content	84%	14%	2%	0%	0%	301	4.82	0.42
Simulated distance learning systems	67%	30%	3%	0%	0%	302	4.64	0.55
Information about research findings and evaluation strategies	30%	58%	11%	0%	0%	301	4.18	0.63
Information concerning critical issues in distance teaching	70%	28%	2%	0%	0%	301	4.69	0.50
Information about teaching/learning strategies	56%	40%	4%	0%	0%	302	4.52	0.58
Information about interactive technology	75%	23%	2%	0%	0%	301	4.73	0.49
Overall workshop rating	87%	12%	1%	0%	0%	298	4.87	0.36

Summary of Comments from Workshop Evaluations

Topic of Comment	N
Which components were most useful to you	
Using the equipment	131
Everything	22
Sharing with other teachers	20
Discussion of critical issues	16
Good presenters/speakers	13
The information about technology	11
The handouts/book	8
The teaching practical tips	6
Watching other people use the system	5
Leadership of the instructors	1
Meeting TV teachers	1
Information about Star Schools	1
Active participation	1
Incorporating research and practice	1
Provide suggestions for improving the workshop	
More time to use the equipment	10
Use the ICN	7
Provide examples of good TV teaching	5
Spend less time on general teacher education information	4
Give presentations using the system	3
Change the time of the workshop	3
Spend more time addressing critical issues	3
Adhere to the schedule	3
Shorten day one/provide more breaks	3
Have administrators use the system/include administration	2
Provide more small group work	2
Improve the equipment	2
Don't use jargon	2
Make the workshop longer	2
Better information prior to the workshop	2
Omit the ICN history	2
Have less lecture	2
Use two sets of classrooms to speed up the mini-lessons	1
Make participants take notes	1
Have an engineer to answer questions	1
Provide more information about the role of the coordinator	1
Don't slant the research presentation	1
Number the pages in the manual	1
More evaluation of presentations	1
Don't spend time explaining manual materials	1
Keep workshop size under 30	1
Keep two facilitators	1
Don't include contract negotiation/anti-administration discussion	1

Table includes multiple responses from 188 of 302 respondents

Comparison of pre and post assessment scores of workshop participants

MATCHED ITEMS	Pretest Mean	Pretest N	Pretest S.D.	Posttest Mean	Posttest N	Posttest S.D.	T-value	Probability
Feeling about effectiveness of interactive television (ITV)[1]	2. 76	245	0.72	3.29	245	0.71	-10.27	0.000
LEVEL OF KNOWLEDGE ABOUT:								
Unique characteristics of ITV	2.25	258	0.99	4.02	258	0.50	-28.01	0.000
Components of ITV	2.14	259	0.99	4.04	259	0.57	-30.37	0.000
Rationale for using ITV	2.72	260	0.95	4.19	260	0.56	-22.87	0.000
Resources needed to use ITV	2.19	258	1.00	4.01	258	0.58	-29.55	0.000
Teaching strategies to use with ITV	1.93	260	0.87	3.95	260	0.67	-32.69	0.000
Operation of ITV equipment	1.87	260	1.03	3.92	260	0.67	-29.34	0.000
Developing lessons to use over an ITV system	1.75	259	0.89	3.69	259	0.68	-31.63	0.000
Evaluating system components	1.48	260	0.71	3.46	260	0.70	-36.47	0.000
Evaluating teaching using ITV	1.57	260	0.79	3.54	260	0.69	-35.60	0.000
Research findings related to ITV	1.54	260	0.75	3.25	260	0.78	-28.27	0.000
Critical issues related to use of ITV	1.74	249	0. 83	4.05	249	0.69	-36.65	0.000

---

[1] Feelings Scale:	1=much less effective	2=less effective	3=about the same	4=more effective	5=much more effective
Knowledge Scale:	1=none	2=very little	3=some	4=quite a bit	5=extensive

Comparison of Bachelors degree and beyond Bachelors degree participants on workshop pre-assessments

ASSESSMENT ITEMS	Bachelors			Beyond			T-value	Probability
	Mean	N	S.D.	Mean	N	S.D.		
Level of experience with interactive television (ITV)[1]	1.48	109	0.91	1.55	143	0.89	-0.60	0.549
Feeling about effectiveness of ITV[2]	2.83	104	0.76	2.72	138	0.67	1.19	0.236
LEVEL OF KNOWLEDGE ABOUT:								
Unique characteristics of ITV	2.21	109	1.00	2.29	142	0.95	-0.63	0.531
Components of ITV	2.06	109	1.06	2.22	143	0.95	-1.26	0.208
Rationale for using ITV	2.56	109	1.03	2.80	143	0.87	-1.98	0.048
Resources needed to use ITV	2.06	109	0.97	2.27	142	1.01	-1.74	0.083
Teaching strategies to use with ITV	1.86	109	0.87	1.97	143	0.84	-0.95	0.345
Operation of ITV equipment	1.83	109	1.04	1.90	143	1.01	-0.54	0.592
Developing lessons to use over an ITV systems	1.69	109	0.87	1.77	143	0.85	-0.74	0.459
Evaluating system components	1.43	109	0.61	1.51	143	0.76	-0.92	0.360*
Evaluating teaching using ITV	1.51	109	0.73	1.59	143	0.81	-0.75	0.455
Research findings relatedto ITV	1.45	109	0.66	1.56	143	0.78	-1.19	0.236
Critical issues related to use of ITV	1.63	107	0. 77	1.78	142	0.84	-1.49	0.136

* ***Separate t-test used due to unequal variance***

[1]Experience Scale:	1= no experience	2=very little	3=some	4=extensive	5=extensive
[2]Feelings Scale:	1=much less effective	2=less effective	3=about the same	4=more effective	5=much more effective
Knowledge Scale:	1=none	2=very little	3=some	4=quite a bit	5=extensive

Comparison of Bachelors degree and beyond Bachelors degree participants on workshop post-assessments

ASSESSMENT ITEMS	Bachelors			Beyond			T-value	Probability
	Mean	N	S.D.	Mean	N	S.D.		
Feeling about effectiveness of interactive television (ITV)[1]	3.31	108	0.80	3.25	139	0.65	0.57	0.572*
LEVEL OF KNOWLEDGE ABOUT:								
Unique characteristics of ITV	4.07	109	0.50	3.97	142	0.46	1.66	0.098
Components of ITV	4.08	108	0.60	4.02	143	0.54	0.87	0.387
Rationale for using ITV	4.25	109	0.55	4.15	143	0.58	1.40	0.163
Resources needed to use ITV	4.00	108	0.64	4.03	143	0.52	-0.37	0.711*
Teaching strategies to use with ITV	3.98	109	0.71	3.92	143	0.65	0.77	0.444
Operation of ITV equipment	4.00	109	0.68	3.86	143	0.66	1.65	0.100
Developing lessons to use over an ITV system	3.74	108	0.72	3.63	143	0.65	1.29	0.198
Evaluating system components	3.49	109	0.74	3.43	143	0.68	0.67	0.506
Evaluating teaching using ITV	3.51	109	0.72	3.56	143	0.67	-0.52	0.602
Research findings related to ITV	3.23	109	0.81	3.27	143	0.75	-0.44	0.662
Critical issues related to use of ITV	4.02	107	0. 71	4.05	136	0.67	-0.37	0.713

* *Separate t-test used due to unequal variance*

[1] Feelings Scale:	1=much less effective	2=less effective	3=about the same	4=more effective	5=much more effective
Knowledge Scale:	1=none	2=very little	3=some	4=quite a bit	5=extensive

Comparison of teachers and other participants on workshop pre-assessments

ASSESSMENT ITEMS	Teachers			Other			T-value	Probability
	Mean	N	S.D.	Mean	N	S.D.		
Level of experience with interactive television (ITV)[1]	1.45	173	0.85	1.84	61	1.02	-2.92	0.004
Feeling about effectiveness of ITV[2]	2.74	163	0.73	2.82	61	0.62	-0.79	0.428
LEVEL OF KNOWLEDGE ABOUT:								
Unique characteristics of ITV	2.16	173	0.96	2.65	60	1.01	-3.35	0.001
Components of ITV	2.05	173	0.98	2.52	61	1.03	-3.23	0.001
Rationale for using ITV	2.53	173	0.95	3.25	61	0.72	-6.09	0.000*
Resources needed to use ITV	2.04	172	0.95	2.59	61	1.07	-3.77	0.000
Teaching strategies to use with ITV	1.84	173	0.83	2.25	61	0.93	-3.19	0.002
Operation of ITV equipment	1.74	173	0.92	2.38	61	1.25	-3.64	0.000*
Developing lessons to use over an ITV system	1.66	173	0.87	2.05	61	0.92	-2.96	0.003
Evaluating system components	1.40	173	0.64*	1.72	61	0.90	-2.54	0.013*
Evaluating teaching using ITV	1.46	173	0.73	1.89	61	0.88	-3.69	0.000
Research findings related to ITV	1.39	173	0.64	1.92	61	0.88	-4.28	0.000*
Critical issues related to use of ITV	1.60	173	0.74	2.20	59	0.91	-4.66	0.000*

* *Separate t-test used due to unequal variance*

[1] Experience Scale:	1= no experience	2=very little	3=some	4=extensive	5=extensive
[2] Feelings Scale:	1=much less effective	2=less effective	3=about the same	4=more effective	5=much more effective
Knowledge Scale:	1=none	2=very little	3=some	4=quite a bit	5=extensive

Comparisons of teachers and other participants on workshop post-assessments

ASSESSMENT ITEMS	Teachers			Other			T-value	Probability
	Mean	N	S.D.	Mean	N	S.D.		
Feeling about effectiveness of interactive television (ITV)[1]	3.22	171	0.73	3.50	58	0.66	-2.56	0.011
LEVEL OF KNOWLEDGE ABOUT:								
Unique characteristics of ITV	4.04	173	0.51	4.00	61	0.41	0.62	0.535*
Components of ITV	4.07	173	0.57	4.03	60	0.55	0.43	0.669
Rationale for using ITV	4.20	173	0.59	4.18	61	0.53	0.19	0.850
Resources needed to use ITV	4.02	172	0.58	4.10	61	0.60	-0.93	0.352
Teaching strategies to use with ITV	3.92	173	0.69	4.07	61	0.60	-1.47	0.144
Operation of ITV equipment	3.93	173	0.66	3.93	61	0.70	-0.04	0.970
Developing lessons to use over an ITV system	3.68	172	0.71	3.74	61	0.63	-0.56	0.575
Evaluating system components	3.47	173	0.72	3.44	61	0.67	0.24	0.808
Evaluating teaching using ITV	3.51	173	0.69	3.62	61	0.69	-1.06	0.290
Research findings related to ITV	3.24	173	0.79	3.28	61	0.69	-0.31	0.753
Critical issues related to use of ITV	4.07	168	0.69	4.05	59	0.68	0.14	0.888

* *Separate t-test used due to unequal variance*

[1] Feelings Scale:	1=much less effective	2=less effective	3=about the same	4=more effective	5=much more effective
Knowledge Scale:	1=none	2=very little	3=some	4=quite a bit	5=extensive

APPENDIX U

Verification Survey

Institute Participant Survey

1. Having attended a curriculum institute and having had some time to reflect on it, are the evaluation results what you would have expected? Explain why or why not.

2. In your opinion, were the methods and instruments used to collect evaluation information adequate? If not, please explain why.

3. Are there questions that we should have asked but didn't? If so, what were they?

4. If you would be willing to participate in future research projects which may include surveys, focus groups, personal interviews, or videotaping, please check here. _______

Use the back of this page for any additional comments about the institute you would like to share with us.

Institutes

Summary of Categorized Foreign Language Participant Responses for Questions 1-3

(32 Institute participants; 17 surveyed; 10 responses received)

Categorized Responses by Question	Number of Responses
Question 1. Evaluation results were what was expected.	
Yes, participants learned/awareness increased.	8
Surprised at data for some items.	2
Question 2. Methods/instruments were adequate.	
Yes.	9
Difficult to include impressions on 1-5 scale.	1
Question 3. Additional questions we should have asked.	
None.	6
How are you using what you learned?	1

Summary of Categorized Literacy Participant Responses for Questions 1-3

(30 Institute participants; 15 surveyed; 9 responses received)

Categorized Responses by Question	Number of Responses
Question 1. Evaluation results were what was expected.	
Yes, participants learned/awareness increased.	6
Expected lower ratings for participant interaction/computer networking.	2
Exptected alternative assessment lower & using equipment higher.	1
Question 2. Methods/instruments were adequate.	
Yes.	8
Needed to ask about comfort level with technology & why attended.	1
Question 3. Additional questions we should have asked.	
None.	3
How will you use/share this information/training & what problems/needs will you have?	2
Who had taken technical workshop before the Institute?	1
Does school district plan to incorporate ICN into curriculum?	1
Question(s) regarding assigned reading materials.	1

Summary of Categorized Math Participant Responses for Questions 1-3

(75 Institute participants; 25 surveyed; 13 responses received)

Categorized Responses by Question	Number of Responses
Question 1. Evaluation results were what was expected.	
Yes, participants learned/awareness increased.	9
We needed more time with the technology.	3
Equity issues rated lower than expected.*	1
Results were higher than expected.	1
Question 2. Methods/instruments were adequate.	
Yes.	11
Neutral.	1
Questioned completeness because given when people anxious to leave.	1
Question 3. Additional questions we should have asked.	
None.	9
Ask if participants were told what to expect/understood what to expect.	2

---

* One participant had responses in 2 categories: more time with technology & equity issues.

Summary of Categorized Science Participant Responses for Questions 1-3

(67 Institute participants; 23 surveyed; 13 responses received)

Categorized Responses by Question	Number of Responses
Question 1. Evaluation results were what was expected.	
Yes, participants learned/awareness increased.	7
Yes, but expected more distance education focus.	3
Expected higher evaluation ratings.	2
Expected higher pre-test ratings.	1
Question 2. Methods/instruments were adequate.	
Yes.	8
Lot of surveys/evaluations; repetitious.	2
Questioned accuracy because given when people anxious to leave.	1
Alternate assessment advocated.	1
Question 3. Additional questions we should have asked.	
None.	6
Questions about home situation (district support, equipment).	1
If attended in-service workshop?	1
Question regarding relevancy to their classroom.	1
Question about use/problems/process to develop courseware.	1

Summary of Categorized Vocational Education Participant Responses for Questions 1-3

(26 Institute participants; 13 surveyed; 8 responses received)

Categorized Responses by Question	Number of Responses
Question 1. Evaluation results were what was expected.	
Yes, participants learned/awareness increased.	6
Some pre-test items higher/lower than expected.	2
Question 2. Methods/instruments were adequate.	
Yes.	8
Question 3. Additional questions we should have asked.	
None.	3
Who should use fiber optic network?	1
Level of exposure to outcome based education	1

Workshop Participant Survey

1. Having attended a distance education workshop and having had some time to reflect on it, are the evaluation results what you would have expected? Explain why or why not.

2. In your opinion, were the methods and instruments used to collect evaluation information adequate? If not, please explain why.

3. Are there questions that we should have asked but didn't? If so, what were they?

4. If you would be willing to participate in future research projects which may include surveys, focus groups, personal interviews, or videotaping, please check here. _______

Use the back of this page for any additional comments about the workshop you would like to share with us.

Workshops

Summary of Categorized Workshop Participant Responses for Questions 1-3

(346 participants; 119 surveyed; 59 responses received)

Categorized Responses by Question	Number of Responses
Question 1. Evaluation results were what was expected.	
Yes, participants learned.	30
Yes, same as my reaction.	21
No, results were higher than expected.	3
Concerns about distance education/applications.	2
Agreed somewhat.	1
Need for sample lessons not reflected.	1
Question 2. Methods/instruments were adequate.	
Yes.	50
No, tired of forms.	2
No, ask about skills/adaptations.	2
Suggest pre-test prior to workshop.	1
Use written, not multiple choice.	1
Yes, but don't tell you anything.	1
Question 3. Additional questions we should have asked.	
None.	35
Implementation strategies and barriers.	8
Follow-up about how attendees have used the system.	2
Organization of the project.	1
Reservations about using the system.	1
Skill levels.	1
Other.	1

APPENDIX V

Participant Follow-Up Survey

IOWA STAR SCHOOLS PROJECT
INSERVICE WORKSHOP / CURRICULUM INSTITUTE SURVEY

Note: Iowa Communication Network (ICN) = two way interactive distance education technology

I. Please darken the appropriate circle that indicates the current level of adequacy for the following items related to teachers' use of the Iowa Communications Network (ICN) for K-12 instruction (items 1 through 19).

1	2	3	4	5	6
Very Inadequate	**Inadequate**	**Somewhat Inadequate**	**Somewhat Adequate**	**Adequate**	**Very Adequate**

1. Access to quality teaching materials for ICN use.
2. Teacher released time for distance teaching.
3. Extra pay for ICN teaching.
4. Supervision of remote site students.
5. School Board support for distance teaching.
6. Principal support for distance teaching.
7. Superintendent support for distance teaching.
8. Teacher recognition for ICN use.
9. Teacher planning time for distance teaching.
10. Scheduling procedures for the ICN.
11. Copyright policies related to distance education.
12. Confidentiality policies related to distance education.
13. School district policies for ICN use.
14. Methods of exchanging materials between sites.
15. Flexibility of ICN classroom design.
16. Technical support for ICN use.
17. Distance education technical training for teachers.
18. Access to information about the ICN.
19. Proximity of ICN classrooms to school buildings.

II. Please darken the appropriate circle that indicates the importance of each item in terms of what is needed for successful K-12 use of the ICN for instruction (items 20 through 38).

1	2	3	4	5	6
Very Unimportant	**Unimportant**	**Somewhat Unimportant**	**Somewhat Important**	**Important**	**Very Important**

20. Access to quality teaching materials for ICN use.
21. Teacher released time for distance teaching.
22. Extra pay for ICN teaching.
23. Supervision of remote site students.
24. School Board support for distance teaching.
25. Principal support for distance teaching.
26. Superintendent support for distance teaching.
27. Teacher recognition for ICN use.
28. Teacher planning time for distance teaching.
29. Scheduling procedures for the ICN.
30. Copyright policies related to distance education.
31. Confidentiality policies related to distance education.
32. School district policies for ICN use.
33. Methods of exchanging materials between sites.
34. Flexibility of ICN classroom design.
35. Technical support for ICN use.
36. Distance education technical training for teachers.
37. Access to information about the ICN.
38. Proximity of ICN classrooms to school buildings.

VI. Please darken the appropriate circle for the following questions.

96. Do you have an ICN classroom in your building?
    1) Yes 2) No

97. Since the inservice/workshop, have you used the ICN for classroom instructional activities?
    1) Yes 2) No

98. Have you attended an Internet training session conducted by the AEA this past year?
    1) Yes 2) No

99. Have you accessed the Iowa Database on Internet?
    1) Yes 2) No

100. Which Star Schools Inservice have you attended?
    1) Inservice workshop
    2) Curriculum institute
    3) Both

101. When did you attend the Star Schools inservice?
    1) 1993
    2) 1994
    3) Both

Open-Ended Questions

1. Please list the issues you believe are important and need to be addressed for successful K-12 instructional use of the ICN.

2. List the one issue you believe to be of greatest concern and indicate what action you think needs to occur to adequately address this concern.

Return this with the answer sheet in the enclosed envelope. THANK YOU!

Participant Information from Workshop and Institute Follow-Up Survey
325 Respondents

Variable	Number	Percent
Sex		
Male	119	37%
Female	204	63%
No Response	2	1%
Years as an Educator		
0 - 10 years	70	22%
11 -20 years	109	34%
21 - 30 years	107	33%
31 years or more	27	8%
No Response	12	4%
Educational Degree Held		
Bachelors	191	59%
Masters or above	123	38%
No Response	11	3%
Teaching Level		
Elementary	57	18%
Middle/Junior High	37	11%
Elementary /Middle School	7	2%
High School	183	56%
Junior High and High School	28	9%
K-12	4	1%
High School/Postsecondary	7	2%
No Response	2	1%
Subject Area		
Mathematics	63	19%
Science	48	15%
Mathematics and Science	44	14%
Foreign Language	33	10%
Literacy	50	15%
Foreign Language and Literacy	5	2%
Vocational Ed	55	17%
Other Social Sciences	11	3%
All Elementary Subjects	15	5%
Have an ICN Classroom in Their Building	88	27%
Have Actually Used the ICN	69	21%
Have Attended an Internet Training Session	85	26%
Have Accessed the Iowa Database	33	10%
Participation in Star Schools Activities		
Inservice Workshop	89	27%
Curriculum Institute	92	28%
Both	140	43%
No Response	4	1%
Year Attended Activities		
1993	119	37%
1994	171	53%
Both	29	9%
No Response	6	2%

Teacher Responses to Adequacy Questions on Inservice Workshop / Curriculum Institute Follow-Up Survey (N=325)

Level of Adequacy	1 - Very Inadequate	2 - Inadequate	3 - Somewhat Inadequate	4 - Somewhat Adequate	5 - Adequate	6 - Very Adequate	Valid Responses	Mean	S.D.
Access to quality teaching materials for ICN use.	9%	21%	25%	19%	20%	5%	309	3.35	1.39
Teacher released time for distance teaching.	31%	33%	13%	10%	10%	4%	304	2.47	1.46
Extra pay for ICN teaching.	40%	27%	10%	7%	9%	7%	293	2.38	1.59
Supervision of remote site students.	12%	14%	23%	28%	21%	2%	287	3.39	1.34
School Board support for distance teaching.	13%	16%	22%	25%	18%	7%	295	3.41	1.46
Principal support for distance teaching.	10%	9%	19%	21%	26%	15%	298	3.91	1.52
Superintendent support for distance teaching.	10%	11%	15%	22%	28%	14%	297	3.86	1.53
Teacher recognition for ICN use.	19%	23%	25%	21%	11%	2%	300	2.87	1.33
Teacher planning time for distance teaching.	34%	30%	20%	12%	3%	0%	290	2.22	1.15
Scheduling procedures for the ICN.	20%	18%	23%	23%	14%	3%	297	3.01	1.41

Teacher Responses to Adequacy Questions on Inservice Workshop / Curriculum Institute Follow-Up Survey (Continued)

Level of Adequacy	1 - Very Inadequate	2 - Inadequate	3 - Somewhat Inadequate	4 - Somewhat Adequate	5 - Adequate	6 - Very Adequate	Valid Responses	Mean	S.D.
Copyright policies related to distance education.	13%	14%	20%	29%	22%	2%	284	3.38	1.38
Confidentiality policies related to distance education.	9%	13%	22%	30%	23%	3%	280	3.56	1.30
School district policies for ICN use.	26%	24%	18%	19%	12%	1%	291	2.70	1.41
Methods of exchanging materials between sites.	10%	21%	23%	29%	14%	3%	289	3.26	1.29
Flexibility of ICN classroom design.	12%	20%	21%	26%	19%	3%	294	3.29	1.37
Technical support for ICN use.	6%	10%	22%	29%	25%	8%	293	3.82	1.30
Distance education technical training for teachers.	4%	9%	15%	31%	32%	10%	304	4.10	1.26
Access to information about the ICN.	7%	13%	19%	31%	25%	6%	305	3.72	1.31
Proximity to ICN classrooms to school buildings.	26%	20%	10%	14%	15%	14%	307	3.13	1.80

Teacher Responses to Importance Questions on Inservice Workshop / Curriculum Institute Follow-Up Survey (N=325)

Level of Importance	*1 - Very Unimportant*	*2 - Unimportant*	*3 - Somewhat Unimportant*	*4 - Somewhat Important*	*5 - Important*	*6 - Very Important*	*Valid Responses*	***Mean***	***S.D.***
Access to quality teaching materials for ICN use.	3%	1%	4%	16%	40%	36%	314	4.97	1.12
Teacher released time for distance teaching.	3%	0%	1%	10%	39%	48%	314	5.24	1.02
Extra pay for ICN teaching.	3%	2%	4%	26%	33%	32%	315	4.81	1.15
Supervision of remote site students.	3%	0%	2%	11%	28%	57%	315	5.31	1.04
School Board support for distance teaching.	2%	1%	2%	13%	41%	41%	315	5.13	1.01
Principal support for distance teaching.	2%	1%	1%	5%	41%	50%	315	5.32	0.93
Superintendent support for distance teaching.	2%	1%	2%	8%	40%	47%	315	5.26	0.96
Teacher recognition for ICN use.	3%	6%	13%	29%	34%	15%	313	4.29	1.23
Teacher planning time for distance teaching.	3%	0%	1%	4%	32%	61%	315	5.44	0.95
Scheduling procedures for the ICN.	2%	0%	1%	8%	34%	54%	314	5.34	0.97

Teacher Responses to Importance Questions on Inservice Workshop / Curriculum Institute Follow-Up Survey (Continued)

Level of Importance	1 - Very Unimportant	2 - Unimportant	3 - Somewhat Unimportant	4 - Somewhat Important	5 - Important	6 - Very Important	Valid Responses	Mean	S.D.
Copyright policies related to distance education.	2%	4%	10%	29%	31%	23%	312	4.54	1.20
Confidentiality policies related to distance education.	3%	4%	11%	31%	34%	18%	312	4.43	1.19
School district policies for ICN use.	2%	1%	3%	23%	47%	24%	315	4.85	0.99
Methods of exchanging materials between sites.	2%	0%	1%	10%	44%	42%	315	5.21	0.93
Flexibility of ICN classroom design.	2%	2%	4%	26%	41%	26%	316	4.82	1.02
Technical support for ICN use.	2%	0%	1%	9%	44%	43%	316	5.24	0.91
Distance education technical training for teachers.	2%	1%	1%	8%	31%	58%	316	5.41	0.92
Access to information about the ICN.	2%	1%	3%	16%	39%	40%	316	5.09	1.00
Proximity to ICN classrooms to school buildings.	2%	0%	2%	9%	28%	59%	316	5.38	0.97

Teachers' Adequacy and Importance Ratings for Items Related to the Use of the ICN for K-12 Instruction

Item	Rank[a]	Mean	Rank[b]	Mean	Rank[c]	Difference
	Adequacy		Importance			
Distance education technical training for teachers.	1	4.10	2	5.41	16	1.31
Principal support for distance teaching.	2	3.91	5	5.32	13	1.41
Superintendent support for distance teaching.	3	3.86	7	5.26	14	1.40
Technical support for ICN use.	4	3.82	9	5.24	12	1.42
Access to information about the ICN.	5	3.72	12	5.09	15	1.37
Confidentiality policies related to distance education.	6	3.56	18	4.43	18	0.87
School board support for distance teaching.	7	3.41	11	5.13	9	1.72
Supervision of remote site students.	8	3.39	6	5.31	8	1.92
Copyright policies related to distance education.	9	3.38	17	4.54	17	1.16
Access to quality teaching materials for ICN use.	10	3.35	13	4.97	10	1.62
Flexibility of ICN classroom design.	11	3.29	15	4.82	11	1.53
Methods of exchanging materials between sites.	12	3.26	10	5.21	7	1.95
Proximity of ICN classrooms to school buildings.	13	3.13	3	5.38	5	2.25
Scheduling procedures for the ICN.	14	3.01	4	5.34	4	2.33
Teacher recognition for ICN use.	15	2.87	19	4.29	12	1.42
School district policies for ICN use.	16	2.70	14	4.85	6	2.15
Teacher released time for distance teaching.	17	2.47	8	5.24	2	2.77
Extra pay for ICN teaching.	18	2.38	16	4.81	3	2.43
Teacher planning time for distance teaching.	19	2.22	1	5.44	1	3.22

Adequacy scale: 1=very inadequate, 2=inadequate, 3=somewhat inadequate, 4=somewhat adequate, 5=adequate, 6=very adequate
Importance scale: 1=very unimportant, 2=unimportant, 3=somewhat unimportant, 4=somewhat important, 5=important, 6=very important

[a] 1 indicates most adequate and 19 indicates least adequate

[b] 1 indicates most important and 19 indicates least important

[c] The difference score is defined as the difference between the adequacy and importance means. 1 indicates the largest difference between adequacy and importance and 18 indicates the smallest difference between adequacy and importance. The larger the difference score, the higher the need.

Summary of Teacher Comments
September, 1994 Workshop and Institute Follow-up Survey

Topic of Comment	N
List the issues that need to be addressed for successful K-12 use of the ICN.	
Access to an ICN site/equity in site selection	107
Teacher preparation time/additional pay for distance teaching	54
Distance education training	53
Local cost of distance education, including hardware, training, etc.	39
Course offering information/programming availability	36
ICN scheduling	34
Need for classroom monitors/ remote site discipline	24
School day/school calendar schedules	23
Appropriate instructional modes/maintain student-teacher interaction	22
Greater area cooperation among educational organizations	22
State-level communication/coordination of ICN	19
Public relations	14
Policy development	11
Administrative/teacher support of distance education	11
Internet availability	11
Transportation/distribution of educational materials	9
Class size	9
Teacher displacement	8
Improved classroom technology (cameras, microphones, TV monitors, etc.)	7
Physical conditions in ICN class/flexible room design	5
Technical support	4
Loss of/lack of K-12 control of the ICN	3
Privacy of classes via ICN/confidentiality	1
Assessment of learning via ICN	1
List the one issue you believe to be of greatest concern:	
Access to ICN site/equity in site selection	96
Local cost of distance education, including hardware, training, etc.	32
Teacher preparation time/additional pay for distance teaching	30
Appropriate instructional modes/maintain student-teacher interaction	19
ICN scheduling	18
Distance education training	17
Course offering information/programming availability	16
Administrative/teacher support of distance education	13
State-level communication/coordination of ICN	13
Public relations	10
School day/school calendar schedules	9
Need for classroom monitors/ remote site discipline	9
Class size	5
Improve classroom technology (cameras, microphones, TV monitors, etc.)	4
Policy development	4
Transportation/distribution of educational materials	3
State/federal government support for distance education costs	3
Loss of / lack of K-12 control of the ICN	3
Teacher displacement	2
Physical conditions in ICN class/flexible room design	2
Sale of the ICN system/sale of ICN time to private sector	3
Local operational issues	2
Technical support	1

Table includes responses from 260 of 325 participants

Summary of Teacher Comments
September, 1994 Workshop and Institute Follow-up Survey

Topic of Comment	N
Actions identified to address the areas of greatest concern.	
State/federal government provide support for distance education costs	23
Provide distance education training	20
State mandates/state-level coordination of distance education	11
Develop policy	8
Provide course offering information/programming availability	7
Fund distance education including hardware, training, etc.	6
Administrative/teacher support of distance education	6
Sell ICN time to private/ non-education sector	5
Improve access to ICN site/ equity in site selection	4
Provide teacher preparation time/additional pay for distance teaching	3
Improve physical conditions in classroom/ flexible room designs	3
Identify appropriate instructional modes/student-teacher interaction methods	3
Meet distant students face-to-face/get to know them	3
Provide classroom monitors	2
Provide technical support	2
Encourage school/business partnerships	2
Centralize and streamline ICN scheduling	1
Limit class size	1
Offer Internet access	1
Upgrade classroom technology (cameras, microphones, TV monitors, etc.)	1
Involve teachers/professional groups in decision-making	1
Screen potential distant students	1
Lengthen school day/year	1
Increase local cooperation among educational organizations	1
Increase ICN fees	1
Restructure school day	1
Reserve K-12 ICN time	1
Improve assessment of learning via ICN	1
Extend teaching contracts	1
Seek grants/outside funding	1
Increase K-12 control of the ICN	1
Resolve local operational issues	1
Control costs of ICN	1

APPENDIX W

TEA Surveys

TEA Group Survey
Summary of Results - January, 1994

Please answer the following questions:

1. ***Briefly describe any activities your group has conducted using the ICN.***
2. ***Highlight one or two of the most interesting or significant activities your group has been involved in as a result of the Star Schools Project.***

COORDINATION

- The ICN was used by the coordinator's staff for the following activities:
- Three meetings of the TEA staff.
- A workshop for faculty from the Des Moines Area Community College November 22-24: 24 participants, 41 ISU instructors. ISU and DMACC (Ankeny) were sites.
- Publication of the monograph "Distance Education: Review of the Literature," and its publication by the Association for Educational Communications and Technology.

PRESERVICE

- "Turn On Your Harp" (Harp Lessons on the ICN). Four junior high orchestra harp students in Cedar Falls take half of their lessons on the Iowa Communications Network. The harp instructor who lives in Des Moines travels to Cedar Falls every other week to give lessons. On alternating weeks the students receive instruction on the fiber optic network at the University of Northern Iowa Schindler Education Center. The harp instructor transmits form the Iowa Public Television studio in Johnston. The school orchestra instructor arranges lesson dates and times, communicates with media personnel, assists with related logistics, and operates cameras and sound during the televised lessons. The fiberoptic telecommunications network is providing the music instructor with a valuable tool for connecting with students, and a potential for reaching more students in the future with an interesting and effective application of the new technology.

FOREIGN LANGUAGE

- During the Winter of 1994 the ICN system is being used to evaluate in-service and pre-service foreign language teachers' oral competencies. Paul Hoekstra, the state foreign language coordinator, has facilitated this activity. Over 90 in-service foreign language teachers are being evaluated on the system using the ACTFL oral proficiency exam as the metric. This activity is a direct result of the needs we ascertained form the teachers we worked with this past summer - as you may recall our observations of their language skills were quite frank - we felt that at least 75% of the institute participants lacked communicative ability in the language that they were assigned to teach.
- We have held meetings involving last year's institute instructors to analyze the feedback and data from the '93 institute. We have also been working on plans for the 1994 summer institute. The general format is tentative but we shall be including the following areas:

- Micro computing for the classroom: In this section of the instituteparticipants will create materials for the foreign language classroom integrating text, graphics, sound, and video. The relevance of computer technology to fiber-optic distance education as well as to foreign language instruction in general will be examined. Instructional Leader: Michael Fast.
- Topics in foreign language assessment and the interactive television classroom curriculum: In this section the participants will discuss how the proposed ACTFL standards for foreign language instruction will affect the K-12 foreign language curriculum. We will also spend time discussing and developing criteria for portfolio assessment in the language class. Instructional Leader: Leslie Schrier.
- Task analysis: In this section we will ask all participants to share a prepared video of their teaching. We will discuss various techniques for creating effective foreign language instruction for both interactive television and single classroom environments. Instructional Leaders: Michael Everson and John Watzke.
- Work continues to be carried out on the Star Schools funded research project: "Assessing the roles of instructors and facilitators in fully interactive distant foreign language teaching."
- Michael Fast gave a presentation on 7.12.93 to the State Commission on Foreign Language Teaching and International Cooperation, at IPTV, Des Moines. His talk was titled "Fiber-Optic networking in the State of Iowa and its significance for education and foreign/second language instruction."
- On November 21, 1993 Mike Fast, Mike Morris, and Leslie Schrier of the University of Iowa presented preliminary results of the Star Schools Funded Research Project- "Assessing the roles of instructors and facilitators in fully interactive distant foreign language teaching." This panel presentation was part of a conference session entitled, "Teaching Anxieties," at the annual meeting of the American Conference on the Teaching of Foreign Languages (ACTFL) held in San Antonio, Texas.

MATHEMATICS

- Our first session over the ICN will occur on Saturday, February 19. Two other one-day sessions will be held on March 19 and April 23 (as well as the June 13-14 interdisciplinary session). Participants will interact and collaborate via the ICN from approximately 15 sites located throughout the state. A K-12 teacher at each site will be the local facilitator.
- The specific focus of the mathematics component will be on the role of discrete mathematics in national K-12 mathematics curriculum reform. Institute activities and lessons will address topics in discrete mathematics, including graph theory, sequences and series, and recursion and iteration. Activities will illustrate not only content but also instructional activities and related assessment tasks that help students in elementary, middle, and secondary schools develop understanding of discrete mathematics as part of their total mathematics experience. Discussion of pedagogical implications of national curriculum reform in the context of distance learning will develop naturally from the activities. The institute will also engage 75 K-12 teachers in direct usage of the ICN as a way to communicate both mathematically and professionally.

LITERACY

- Implemented two research projects involving distance education.
- Formed an Advisory Group comprised of 1993 Literacy Institute members.
- Contributed to a manuscript describing possible uses of distance education in curricular areas.
- Maintained communication with 1993 Literacy Institute members via 3 mailings.
- Participated in three presentations at the Iowa Distance Learning Association Conference.
- Conducted one Advisory Group fiber optics conference and scheduled two additional fiber optics conferences to plan activities for 1993 Institute participants and to plan the 1994 Institute.
- Planned two "literacy events" for K-12 classroom teachers using the ICN.
- Planned for three "teacher swapshops" (one for elementary teachers, one for middle-school teachers, one for high school teachers) using the ICN and facilitated by members of the Advisory Group.
- Planned for a research fiber optics conference for faculty of literacy from ISU, U of I and UNI.
- Conducted a fiber optics conference between preservice teachers from ISU and UNI. Students paired as "e-mail journal pals" introduced themselves to each other prior to the initiation of correspondence via e-mail.

VOCATIONAL

- Presentation workshop at the First Annual Iowa Distance Learning Associaion Conference February 4, 1994.
- Wade Miller presented from Iowa State University room N147 Lagomarcino Hall to ICN sites at Drake University, University of Iowa, and University of Northern Iowa. The audience was composed of conference attendees many of whom were area education agency representatives. Margaret Torrie was present at the Drake site to help facilitate and direct questions.
- Identification of commercially prepared vocational education curriculum materials that are technologically compatable with the standard fiber optic classroom and available statewide for use by vocational educators. These include workplace readiness and tech prep materials with laser disk computer and video presentation.
- Providing a summer instituite in 1993 using a mock system in Lagomarcino hall to provide experience for the participants.
- Developing 1994 summer institute plans that will use the ICN system connecting participants from multiple sites.
- Margaret Torrie presented a comparative distance education research study on live vs. video instruction at the Iowa Distance Learing Association Conference February 4, 1994.
- Margaret Torrie and Wade Miller have just been awarded a research grant. The purpose of their study is to assess the attitudes of Iowa vocational teachers toward using interactive distance education strategies to support the competency based curriculum reform efforts mandated by the Iowa Department of Education and the Iowa legislature.

- Margaret Torrie and Cheryl Hausafus have just been awarded a research grant to determine the viability of utilizing distance education to deliver secondary school HIV/AIDS education.

  The operative question from the above studies is: Can use of the ICN facilitate the teaching of sensitive topics and also further the efforts of ongoing curriculum reform?

- A concern is to provide immediate fiber optic and laser disk distance education pedogogical techniques to vocational teacher education students scheduled to student teach Fall 1994. To this end, Margaret Torrie and Cheryl Hausafus have developed two summer workshops for 1994. These workshops have been advertised widely within professional associations and the Iowa State University summer course bulletin.
- In an effort to provide hands-on ICN classroom experiences for Spring 1994 semester students, Margaret Torrie has scheduled the ICN network in Lagomarcino Hall on the Iowa State University campus and at Ames High School. Half of the class will be at the Ames High School and half on the ISU campus. This will provide experience and serve as introductory exposure to the standard classroom in the local site.
- Margaret Torrie has initiated efforts to explore a connection with Ameri Corps K-12 programs with a focus on youth involvement in service areas. Agencies and school districts would be connected through the ICN.

EVALUATION

- The evaluation team has used the ICN to meet with Regional Coordinators and Project Administration to plan and design the state-wide needs assessment that will be completed in March, 1994. The state-wide assessment will be conducted to determine the instructional, administrative, and staff development needs that can be met at the K-12 level via the Iowa Communications Network (ICN). Focus groups will be held first at the regional level to determine each region's needs, with some of the regions utilizing the ICN to conduct the focus groups. A statewide focus group will be held over the ICN in mid-March to determine statewide priorities.
- The state-wide data base that has been established as a result of the evaluation activities is a significant aspect of the Star Schools Project. This data base provides information that is useful for planning and decision making. The evaluation activities of the project also have enhanced collaboration and communication between and among educational groups in the sate from the area education agencies, community colleges, universities, and local schools. Representatives from these groups have been involved in designing and carrying out the evaluation activities and in discussing the results.

Teacher Education Alliance Survey
September 29, 1994

What are the primary issues you believe will affect the successful use of the ICN for education?

In what ways do you see the Iowa Distance Education Alliance and the Teacher Education Alliance continuing?

Describe the roles and responsibilities you see for the following groups in continuing the work begun through the Iowa Star Schools Project.

Regent Institutions

IPTV

Community Colleges

AEAs

Department of Education

Others

Clearinghouse

Use the space below for any other comments you would like to make.

Teacher Education Alliance Survey Summary

Collected September 29, 1994

What are the primary issues you believe will affect the successful use of the ICN for education?

Public versus private operation of the ICN. Teacher distance education training. Scheduling - ability of K-12 to get time on system.

Continuing inservice and preservice opportunities for teachers are essential. Teacher educator institutions must continue to work to infuse ICN activities into their curriculum.

Increased access - more classrooms, additional training, adequate publicity, and improved scheduling.

Climate for use - amount of support and encouragement and reward for using ICN. Scheduling opportunities - availability of time for enrichment uses. Who controls the system - whether it remains educationally focused. Number of teachers who are qualified and confident.

Connections of additional schools - all levels (we must have middle schools and elementary school as part of the system). We must continue to train teachers and administrators. The clearinghouse must expand its activities. School boards and the general public must be informed about the potential impact of the use of the ICN for distance education in Iowa.

Structure and organization of school day. Our lock-step schedules following a time clock with each teacher scheduled each now with 25 students, doesn't provide the flexibility to interact between or among schools as well as time for development of activities by teachers.

Labs that are more tilted to research in teacher retention and "real" learning. How to coordinate specific project teams school to school. Ability for university curriculum people to work with AEA staff, teachers, community leaders.

Financial support, administrative support, increasing number of sites, public understanding, flexible application and scheduling.

In what way do you see the Iowa Distance Education Alliance and the Teacher Education Alliance continuing?

Staying in a loose "holding pattern" awaiting future funding opportunities - such as a Star-Schools type program or for a distance education institute/center. As an affiliate of IDLA.

I believe that a formal organization needs to be formed to keep IDEA active.

TEA - to collaborate and develop future proposals and cooperate on research and evaluation activities. IDEA - maintain a state-wide presence.

Informal alliances with like-minded colleagues. Future research and writing. Applications for further funding.

Our strength is in our combined human resources and cooperative effort in reaching our goals. We should not be in competition. We need to continue working as a team - locating funds, writing grants, actively work toward common goals.

Provide the leadership for systemic change that will permit and encourage the use of the ICN among K-12 teachers and students.

New proposals, follow-up studies, continuing workshops and promotion of professional use of the ICN, and "systemic" thinking.

Describe the roles and responsibilities you see for the following groups in continuing the work begun through the Iowa Star Schools Project.

Regent Institutions

Will continue to train (prospective) teachers in pre-service programs. In-service teachers can be reached via graduate-level courses in distance education. Could host distance education conference (e.g. AECT summer 1995).

These schools must take a leadership role in keeping the TEA alive. Others would look to these institutions for leadership.

Research in distance education, leadership in new proposals to fund distance education activities, evaluation of distance education activities, and teacher staff development and pre-service.

Support and reward for work with project by faculty. Providing in-service and pre-service sessions for K-12 teachers.

Provide continued leadership in searching for funds, training (preservice and inservice) and research.

Develop and deliver pre- and inservice teacher education that are conducted via the ICN. Develop a research base on the effectiveness of distance education teaching.

Contribution - university staff and cost sharing.

Working with teacher education faculty. Working with K-12 teachers and students. Collaboration between institutions and programs.

IPTV

Could help spread the word about distance education in Iowa, and distance education in general.

Public relations will be a continuing role for IPTV.

Improving access to the ICN, leadership for the state-wide alliance, and liaison with state government.

Provide the hardware for distance education.

Use facilities to promote retention and ties to national groups.

Central location for information/connections.

Community Colleges

Scheduling and expertise on distance education organization and management.

Provide vocational education activities for pre- and inservice teachers (yes, I know they are in liberal arts - they just shouldn't be).

Working together. Staff development.

AEAs

Provide training (in-service) and learning materials.

These groups need to take a leadership role in involving K-12 teachers and classrooms.

Providing information about distance education to schools, teachers, and administrators.

Maintain and disseminate ICN materials (tapes and manuals).

Must play an important role in providing inservice training.

Serve as facilitators and also as originators of a limited number of inservice activities over the ICN.

Developing "systemic" thinking.

Keeping connections with K-12 teachers and students. Continue staff development. Work to help teachers make connections to Internet.

Department of Education

Distance education certification?

Seeking funding for TEA/IDEA - like activities on a limited basis, to continue what has started.

Use publications and personnel to disseminate information.

Be proactive in changing the way we certify teachers and employ teachers. For example, differential staffing, variable scheduling, etc. all of which facilitate use of the ICN by K-12 classroom teachers.

Spreading word of success. Long term support.

Others

Assessment of goals beyond remembering information.

Clearinghouse

What clearinghouse? Disseminator of distance education information.

Continue to provide information, and seek funding for access to Internet.

Holding material for research.

This role is essential to the success of the network. The location of clearinghouse and the expanded role (including information) needs to be addressed immediately!

Disseminate research and evaluation data and "stories" of success.

Continue to develop database. Making it accessible to teachers and students.

Use the space below for any other comments you would like to make.

Let's keep up the collaboration/cooperation.

APPENDIX X

TEA Research

Research funded through Iowa's Star Schools Project

As part of the research component of the Iowa Star Schools projects, educators from across the state submitted proposals for research projects. The funded projects are listed below.

Teachers' Training in Distance Education and Their Willingness to Use the Technology After the Completion of Inservice Training, Sanaa Abou-Dagga and Mary Herring, Iowa State University.

Virtual Field Experience Utilizing Computer Networks and Interactive Television, Gayle Allen, Iowa State University.

Distance Teaching with Interactive Television: Strategies that Promote Interaction with Remote-Site Students, Molly Herman Baker, Western Illinois University.

Assessment of Distance Education Implementation in Iowa: Concerns and Indicators of Success, Patsy J. Fagan, Drake University.

Using Diaries to Assess the Learning Needs and Course Performance of Students Served by Three Instructional Delivery Means, David L. Doerfert and W. Wade Miller, Iowa State University.

Cedar Falls Harp Project: Music Instruction on the Fiber Optic Telecommunications Network, Dennis A. Downs, Cedar Falls Community Schools.

Assessing the Roles of Participation in Multi-Site, Foreign Language Instruction: Interaction in a Technology-Mediated Environment, Michael Graham Fast, University of Iowa.

Do Music Teachers Feel That the Iowa Communications Network is a Valid Platform for the Delivery of Music Instruction? and Where are Music Teachers in the Innovation-Decision Making Process?, Brenda Kerr, Des Moines Public Schools.

Investigating Teacher Change Associated with Distance Learning in Education, Donna Merkley, Iowa State University, Mary Bozik and Kathy Oakland, University of Northern Iowa.

Usefulness of the Iowa Communications Network for Delivering Instruction in Secondary Agriculture Programs, Greg Miller, Iowa State University.

Community College Demographics and Innovativeness Toward Distance Education: Is there a Correlation?, Jodi Lynn Rude, Iowa State University.

Student Involvement in the Distance Education Classroom: Teacher and Student Perceptions of Effective Instructional Methods, Krista R. Schoenfelder, University of Northern Iowa.

Teaching Science at a Distance: The Teacher's Perspective, John W. Tillotson and Laura Henriques, University of Iowa.

An Assessment of Iowa Secondary Vocational Teachers' Attitudes Toward Using Interactive Distance Education Strategies to Support Competency-Based Curriculum Reform Efforts, Margaret Torrie and W. Wade Miller, Iowa State University.

The Iowa Communications Network as a Vehicle for the Delivery of Applied Instrumental Music Instruction, Donald Simonson, Iowa State University.

Utilizing Distance Education to Deliver Secondary School HIV/AIDS Education, Margaret Torrie and Cheryl Hausafus, Iowa State University.

Videos developed by the TEA as part of the Iowa Star Schools Project

Eight Single-Concept Videos

Characteristics:

- A. 10-15 minutes each
- B. Instructional - visual and verbal
- C. Voice over - few people
- D. Clear objectives

Foundations

1. *Definition and Background*

   Traces historical development of distance education and defines the Iowa concept of distance education.

2. *Theory and Research*

   Discusses the implication of research for practice.

3. *Technologies and Terminology Primer*

   Describes systems of interactive telecommunications.

4. *Iowa Communications Network*

   Explains the purpose, structure, and capabilities of the Iowa Communications Network.

Application

5. *The Teacher*

   Describes the skills needed for successful distance teaching.

6. *The Student*

   Describes the skills needed for successful distance learning.

7. *The Curriculum*

   Using distance education to support and enrich the curriculum.

8. *The Classroom*

   Using the hardware of the distance education classroom.

One Project Video

A Room with a View: Iowa's Star Schools Project

Documents the reality of the long-awaited potential of distance education.

APPENDIX Y

Clearinghouse On-Line Survey and User Log Data

Iowa Distance Education Alliance
Clearinghouse Survey

In order to improve the Iowa Database, we need to hear from you. Please complete the following survey. If your software will not allow you to complete the survey on the network, please print this form and mail or fax your responses to the Research Institute for Studies in Education, E005 Lagomarcino Hall, Iowa State University, Ames, Iowa 50010. FAX: 515-294-9284.

1. Please indicate your primary occupational category.

   K-12 classroom teacher
   K-12 administrator/staff
   K-12 student
   AEA staff
   Community college faculty/staff
   Community college student
   University faculty/staff
   University student
   Other education related occupation: Specify ______________________
   Non-education related occupation: Specify ________________________

2. Did you attend an Internet training session sponsored by the Iowa Star Schools project?

   Yes
   No
   Don't know

3. How frequently have you accessed the Iowa Database?

   This is my first time
   2-5 times
   5-10 times
   More than 10 times

4. Please rate the accessibility of the Iowa Database.

   Very easy to access
   Easy to access
   Difficult to access
   Very difficult to access

5. Rate the usefulness of the information found in the Iowa Database.

   Very useful
   Useful
   Somewhat useful
   Not at all useful

6. Did the Iowa Database meet your expectation?

   Exceeded expectations
   Met expectations
   Partially met expectations
   Did not meet expectations

7. On a one to ten scale with 1 as poor and 10 as excellent, provide an overall rating of the Iowa Database.

   ____

8. What was the most useful aspect of the Iowa Database?

9. What was the most disappointing aspect of the Iowa Database?

10. What other information would you like to see included in the Iowa Database?

Iowa Database Clearinghouse Survey Results

ID	Occupation	Internet Training	Frequency of Use	Accessibility	Usefulness	Expectations	Rating
001	K-12 teacher	No	2-5	Easy	Somewhat	Partially met	3
002	AEA staff	Yes	5-10	Difficult	Somewhat	Partially met	4
003	K-12 Computer Coordinator	Yes	1	Easy	Useful	Met	8
004	Research Manager, State Agency	No	1	Difficult	Somewhat	Partially met	7
005	K-12 student	No	1	Difficult	Somewhat	Partially met	6
006	K-12 teacher	Yes	1	Difficult	Somewhat	Partially met	8
007	Federal Government	No	1	Easy	Somewhat	Not met	5

Comments from Open-ended Questions

What was the most useful aspect of the Iowa Database?

- Have yet to discover that.
- This form was new to me. Very well done.
- Looks like a very useful tool for classroom teachers.
- One place for all related information needed.

What was the most disappointing aspect of the Iowa Database?

- Information shared by subject or grade level.
- It is novel, but paper access is still easier and more complete.
- How high schools in Iowa are using the Internet.
- Weak support for any research other than that related to classroom teaching.

What other information would you like to see included in the Iowa Database?

- Realizing that servicing classroom teachers using or preparing to use the ICN is the priority, it would be very desirable eventually to have a wide array of demographic and social information about Iowa such as census data, crime data, vital statistics, and so forth. A link with the Iowa General Assembly, which is developing a Mosaic home page, would be very useful to both general users and to teachers. Also links to other state agencies as they connect to the Internet and begin to make information available would be very desirable. Finally, links to the state's universities could be useful especially if they highlighted current research in areas of current public interest.
- ICN availability and usage.
- Do you have a file of highest elected officials for all cities and counties in Iowa? I was hoping to find it under state information, but no luck. If you have something like this, or can point me somewhere, please e-mail me.

Summary of User's Log from the Iowa Database
April 1 to August 1, 1994

Name of Folder/File	N
Star Schools	**116**
Project Summary	92
ICN	**228**
Project Management Staff	23
How to Use ICN/Tips	65
TEA Training Syllabus	19
K-16 Program Offerings/Needs	26
Regional Coordinators	18
TEA Staff	7
Scheduling Process	16
Listing of Schedule of Classes	29
Regional/State Newsletters	56
Distance Education Review (monograph)	9
Graphics	35
Audio	0
State Reports	**180**
Technology Commission Report	29
Clinton Schools - Phase III Handbook	7
Clinton Schools - Phase III Plan	2
BEDS - Public Schools	31
BEDS - Nonpublic Schools	8
Organization and Staff	9
Matchmaker	**141**
Personnel Directory	38
Staff Development Opportunities	18
Star Schools Curriculum Institutes 1994	8
Workshop Information 1994	16
School Districts by AEA	38
World of Education	**0**
The Explorer	0
FARNet	0
KaleidoSpace	0
Interactive Games	0
Electronic Picturebooks	0
The AskERIC Virtual Library	0
The Journey North	0
NOAA National Climatic Information	0
Global Network Navigator	0
The Internic	0
The Global Schoolhouse Project	0
Cisco Education Catalog	0
The Department of Education: OERI's New World Wide Web Server	0

APPENDIX Z

Clearinghouse Survey of AEA Personnel

Iowa Distance Education Alliance
AEA Clearinghouse Survey

(Telephone survey to each of the AEA trainers)

1. How many Internet training sessions has the AEA conducted in the last year?

2. What types of information do you collect about the teachers attending Internet training in your region? (Number of attendees? Grade level? etc.)

3. When you conduct Internet training for teachers, do you demonstrate how to access the Iowa Database and/or what information do you provide about the Iowa Database?

4. How familiar are you with the Iowa Database?

4. How many school districts in your region are actively using the Internet and do you track their level of use?

5. In your opinion, how many teachers in your region are using the Iowa Database?

6. How do teachers in your region connect to the Internet?

7. What do you think teachers and AEA staff would like to see on the Iowa Database?

AEA Clearinghouse Survey Results
September, 1994

How many Internet training sessions has your AEA conducted in the last year?

Three training sessions, one large one funded with Star Schools money and two others that were major.

Two large ones where everybody was invited in. I and my assistant have probably conducted 30 smaller ones. Sometimes actually going out to the schools and working with small groups of teachers on the Internet.

Two large group sessions plus some minor ones, four to five in local school districts. We have an inservice coming up with districts where we will demonstrate both the ICN and Net Iowa.

Group sessions we have had lots of. We had a team one with a media specialist and a teacher teamed up. One for superintendents, one for principals, and specific ones with districts for inservice. We also had two curricular based sessions showing uses of Internet during the summer.

Two all day sessions for schools and two half day sessions for internal audiences.

Two formal training sessions plus on-line training on the Internet for Internet users.

Had two classes this summer (one hour contacts) plus one big workshop earlier.

Several at different levels; five introductory sessions and one staff development session. Another staff development session is scheduled.

Invited all those interested to one big meeting. Also had three major group sessions for teachers. Nine more sessions at the county level (one for each county). Then had two more sessions face-to-face and one session over the ICN. Also had two staff development sessions.

Three sessions have been held, one with Star Schools that had 23 participants, one on our own with 25 participants, and one small group session with eight participants. Have also provided one-on-one assistance.

Two over the ICN and two in-house. Also did some out in the districts and consulting has also been done by technical consultants and the ed services department.

Three half day sessions were held, one for districts using Internet, one for sharing, and one for those new to Internet. Also had some internal training for AEA staff and lots of informal assistance.

Bits and pieces may be tied to other things, but probably a half dozen of the workshop sort. Plus our staff are out in the field doing individual things.

Formal ones, we had three big ones, maybe four, two-day sessions. Probably half a dozen two-hour specific topic sessions like on Mosaic, Eudora, etc.

Have had two staff development classes and more are scheduled. Held an area wide formal workshop with participants from every district, including the parochial schools. Have also provided five or six small presentations.

What types of information do you collect about the teachers attending the training?

None. Each superintendent in the 25 districts has appointed an official Internet liaison officer. These are the people we work with.

None

The consultants have information about the teachers participating.

We know where they came from. We don't ask for their teaching content area or level. The training has not been content oriented. Basically how to use Internet, more technically oriented, We have a woman coming to do some specific stuff on content this fall.

Only have a list of attendees for the one formal workshop.

Participants are not tracked very well. Might still have lists around somewhere. Most participants were from the secondary level. There were some administrators.

We've not really done any tracking. Very general audience. Hodge-podge of teachers from every curricular area have attended. We know who the technology coordinators are. Sometimes they are math and science teachers but sometimes they are whoever is interested. In the initial training, we had the technology or computer person. Some also wear a media hat. We have a sign up sheet from that one. The other 30 or so training sessions, we have had an awful lot of variation.

Who they are, what schools they are from, what their password is. Also host an Internet users group but do not track participants. There is some informal tacking done by the consultants.

Know what schools they are from and who they are. Training was by invitation only, so we know their background. Mostly library media specialists and technology coordinators.

We could get some information, names, grade level, etc.

Don't really track any information, but can get it if needed.

None really. No names were written down. Could provide a guestimate.

Have attendance lists. All but three of the seventeen districts were represented. Primarily secondary teachers, but two elementary teachers attended the second workshop. Attendees included teachers and media specialists.

We have not collected information specifically. We have a list of people and know where they are from, but we have made no effort to track them. The training has not been geared to particular grade levels or curricular areas.

We do have information on attendees.

Do you demonstrate how to access the Iowa Database or provide any other information about the Iowa Database during Internet training?

No demonstration and no information provided.

We demonstrated it at the second session. The first time we couldn't because it was not up yet. We also provide information in the materials they receive.

We do demonstrate the Iowa Database. Plus we put it on the Hotlist for Mosaic for our schools. We install it right in Mosaic so it is easy for them to get to. In the ICUE newsletter, in the issue before the last one, volume 9 number 2, I put an article in and made reference to the Iowa Database. I gave the http number and so forth.

We conducted our workshop before the database was operating and no information was provided.

At that time the database was not up yet, we did our training in February and March. To be honest, I don't believe we have provided any information since then either.

It was not demonstrated. The Iowa Database is somewhat nebulous in my opinion, at least at this time. At the time we did training, it was the early part of Star Schools. The Iowa Database was not even in existence at that point. It was not covered this summer either.

Access to the database is tough. We have tried to demonstrate it but get a message that we cannot connect to the host. We see it as a new option.

We have handouts and we talk about it. There needs to be more information for those doing the training.

It was not up when we did our training. We mentioned that it was being developed and gave participants a tentative list of topics. We talked about what they would like to see on it. No information has been provided to them since.

It was not up when we did the training and we have provided them with no information.

Verbal information only. None have expressed any interest in it. It needs to have a search capability.

We provide information about it and I have seen at least two of the workshops where the database was accessed and participants were shown the shell of the Iowa Database.

We have not demonstrated how to access the Iowa Database. We do provide some information on it. We see the Clearinghouse as subject specific and see it as needed in the next phase of training. Right now we are teaching them about e-mail, how to FTP, about the worldwide web, etc. during this first level of training.

We told them it was there. We have had a considerable amount of trouble with the software and have not been able to demonstrate it yet.

Yes, we have demonstrated it. We provide information to them on how to access it, what is available on it and what is expected to be available on it in the future. We have also taken suggestions from them on what things would be helpful for them to see on there.

How familiar are you with the Iowa Database?

I have not accessed it. I have been at meetings where it has been discussed and have been in discussions about expenditures, etc. We have not received a memo about it, about what is on it or how to access it.

Not very familiar. I've never been into it. I know very, very little about it.

I am on the committee working on it, so I am familiar with it. It is a changing thing. I have seen a demonstration at a Clearinghouse meeting.

I know it is there. I understand you can only scroll or page through it. There is no key word search or random access.

Not very familiar with it. Have seen it, but have not played around on it. I sat by someone who was using it. Its still a pipe dream at this point.

I know about the outline and I have been on it once.

Have seen the shell and have heard about it. When the NCREL guy was here, we saw him in the parking lot and went over and watched him access Internet on his portable computer.

We have discussed it, but I have not used it. I am not partial to scrolling.

Just a little bit familiar. I have not used it much.

I set the Iowa Database up as my home node for starting up on Mosaic. I see it as a good jump point. I have not gone through all of it to be truthful. There is good stuff on there. It is my primary entry point on the web. I hope our own point at the AEA will be that good when we get it done. I am fairly familiar with the Iowa Database, but I am particularly interested in its branch points to get to other places on the web.

I am familiar with it. Two coordinators told us what was available. I read a short article on it that told what kinds of materials are available in the database. A considerable amount of it was not what I would need access to at this time.

On a scale of one to ten, probably about an eight. I have seen it. I have tried to access it a couple of times to see what is in it. I have seen it demonstrated at the Clearinghouse and at staff meetings.

I've not used it. I have seen information on what they are planning to have on it and some things probably are actually on it now. I know what the intent is. I keep hearing how they are going to organize it and it sounds like it is not organized yet, so I haven't been worried too much about it.

I was not aware that it was available. Not at all familiar with it.

I am somewhat familiar with it. I have accessed it, but not lately to be honest.

How many school districts and teachers in your region are actively using the Internet?

We have six active districts that are capable of accessing Internet, two through Star Schools and four through Net Iowa. They have passwords. Twelve others would like to get on. As of tomorrow, there will be zero using Star Schools access because there is no more money. I would guess that about 25 teachers are using Internet during the school day. Others are frustrated with getting access at school and are doing it on their own.

Quite a few districts ordered passwords through Star Schools and did not get them. Those that finally got them were told that they would be charged for the phone time. They are really mad. They paid $50 thinking that they would get some free access. I'd guess about 50 teachers use the Internet, but that number keeps changing daily, going up. I'd say that none have used the Iowa Database.

I'd guess that one-half to two-thirds of our 33 districts are active users of Internet (about 15 to 20). But there are different levels of use. Some are still having trouble getting on and others use it daily. I'd say less than 100 teachers, probably somewhere between 50 and 100, are Internet users. I'm not sure how many have used the Iowa Database, but I have heard some comments about it.

We have 23 districts and I would estimate that 15 are fairly active. I would probably say the same number of teachers are active because they are the initial teachers we trained. Everybody only really got going in February and March. We went to another AEA to do training recently and lots of them hadn't even started yet. Some say we are ahead of others in the state. We got blamed for using up all the watts line money. We probably did. Initially, we were pretty active.

About 30 districts are active, maybe 35. These have e-mail addresses. I would guess that 75-100 teachers are accessing Internet, but none are probably using the Iowa Database.

About 6-7 districts are regular users. Many are trying to access Internet through Star Schools. It took so long to get passwords that it was too late to use them. Two are really active and have gotten training from other places. The loss of the watts line will inhibit use by schools. Four media people and four teachers are active users. There are two in the region that are the most active, one media person and one teacher.

All our districts are interested in Internet. Approximately two-thirds of the 25 districts I would say are active. All of the districts appointed a person to attend the training. One district has a real commitment to using Internet. They subscribe to On-Line America and had an all day inservice. All buildings in that district have an On-Line America account. I don't have any idea how many teachers are active users.

Each of the 22 districts has a password (we bought it). I don't know if they are active. I would guess that of the 22 districts, probably half are using it. We also gave passwords to parochial schools. I don't even have a guess as to how many teachers are using Internet and I have only heard from those teachers that are not interested in the Iowa Database.

I can anticipate, and I don't know, but my perception is that there are about a half dozen districts actively using it. I'd say about 50 teachers are using it. They are not using it on a day to day basis. I have heard some concern about dropping the 800 number, so it makes me think there are more than we know of out there. We are looking into a direct connect for our region. I don't know that teachers are using the Iowa Database as such. I personally see real value in the Iowa Database.

We have distributed somewhere between 250 and 350 passwords. As far as active users, I would doubt in the state of Iowa there would be more than 100. Eighty to ninety percent of those with passwords I would not call active users. In our area, we probably have 25 active users. That's a guess. We can't monitor it, so that is a subjective guess.

One person per district was allowed a password. We have 26 districts and all districts sent a person to the training.

There were 22 districts at the training workshop, and I would guess that about 16 are active users of Internet. As far as number of teachers, it would be a fairly small number, I'd guess about 15. I have not heard that any are using the Iowa Database.

Active users at this point are not very many. I would say there are four districts that have been fairly active in using Internet, and about ten teachers. I have not heard of anyone using the Iowa Database. They don't know how to access it.

Of the 25 districts, I would say that 24 have in some way used Internet. There is only one district I know hasn't used it. I would say 10 to 12 people are really truly active. I would say they are not using the Iowa Database.

All districts, we have 17, are users. I can't tell you how many teachers. We filled two classes this summer of 20 each for our hands-on curricular based classes. That's all we could take. We could have had more. There are a lot of teachers using it. I haven't heard of any using the Iowa Database. The last time the majority of them were probably on there, there wasn't a lot there. Then with them just coming back, if there is more stuff, they probably haven't had time to see it yet.

How do teachers in your region connect to Internet?

Slip connection to ISU was used up to now. We have not decided for the future.

Star Schools

Through the ICN, Star Schools project.

Use Net Iowa. AEA will have direct connect next week. Some schools also have Net Iowa.

One school is using Star Schools, but most are using Net Iowa.

Both the Star Schools Slip access and Net Iowa are used. Two schools were successful with the Star Schools connection.

Net Iowa

One is accessing Internet through the Star Schools slip and one is taking a class at ISU and accesses it somehow through ISU.

Many are using On-Line America, several have accounts with Net Iowa. No one is using the slip from ISU through the Star Schools project. I did not encourage them to use Star Schools access because it is too difficult to use.

There is a little of both Star Schools and Net Iowa access. The 800 number will be gone tomorrow so it is up in the air now.

Schools are using Net Iowa and pay $30 a month.

Most access Internet through Star Schools. A few use Net Iowa or other carriers.

We use the watts line to ISU through Star Schools. Net Iowa wasn't a slip and we liked the slip connection. Net Iowa will be our provider as we come on line at the AEA, but that will be a slip connection.

Most people have been on Net Iowa. We chose that route early because it seemed to be providing the most rewarding experiences. We just purchased some passwords on the ICN and schools have responded to a memo we sent that they have purchased or are purchasing the $50 passwords.

Net Iowa.

What information do you think teachers and AEA personnel would like to see on the Iowa Database?

Software reviews and information about available software, lists of information about Iowa schools like who is using the supercomputer? Who is doing advanced video editing? Who has the Yamaha music program? Which types of management programs do schools have? Also who has voice mail and e-mail? Could provide a lot of the information that AEAs provide to their own schools.

It would be helpful to have a database of contact people to provide guidance on technical questions. A list of resource people. Listing of classes would be good. Also an easy way to find out what classrooms are available on the ICN and be able to schedule on the database.

Staff development opportunities. A statewide calendar of meetings and conferences. Teaching tips. Capability to set up interest groups.

Curricular materials pertinent to Iowa. How others are using on-line access points. Other Iowa teachers using Internet. An e-mail directory. Directions for e-mail connection. E-mail addresses for the AEA to access other state entities.

What other schools are using or doing. What kinds of software/hardware are schools using? Policies. Software programs.

Curricular materials. Technology information. Technology rich school sites and how they are using technology. The Iowa Code. Grant information. The BEDS documents.

A forum to talk to peers. A list of projects for administrators, for instance, where can I find a school using an automated system? Best practices. Internet addresses for educators. A resource group for Iowa. Teaching units. Telecommunications ideas. AEA catalogues for resource sharing.

Gopher to California (or New York) to their Department of Education, access their Gold Mines list and put as much of it as you can on there. We don't need to reinvent the Clearinghouse when almost every other department of education already has one.

No ideas at this time. The way the database is set up hinders its use. Teachers want quick use. There needs to be keyword search.

What would be really neat would be curricular topics organized very, very easily. Techniques and topics would be useful. A list of names in state government is something teachers could care less about. If, say, you had an organized thing for social studies teachers to get information on how to teach government, then teachers would go to the database much faster and with more interest. I understand you have to start with the more easily accessible things, but long term, we need to build in curricular information. It needs to be highly organized, easily accessible, key word searchable. Names of experts would be good.

We need a cascading kind of information. At the state level, maybe the BEDS documents for administrators. University courses, maybe. At the area level, a teacher exchange, media materials, staff development. At the district level, a search for things going on in other districts. The real key to it is many, many schools are starting to look at LANS. Some are getting CD towers with things like the Code of Iowa. If they could access information like that on the Iowa Database, it would be useful. At the area levels, bulletin boards would be useful. The media directors are trying to compile a list now for the Clearinghouse.

The branching points could be expanded. Would be good to have information on listservs for educators. An annotation on what the listserv is, what you could expect on it, and where to go to get it. Expand the branches to other educational points of interest. We'll use apple search on Macs to look for things in our area. The Iowa Database should have Archie and Veronica access and things like web crawler. It would be good to have references like where to go to get the most recent updates of software. It might also talk about pending legislation that would affect education. Not too political, but a neutered sort of way to inform educators, especially in the area of technology legislation. They could also put interesting things going on in the state of Iowa on there. Every month there might be a capsule to highlight one school that is using and doing interesting things with Internet. In October, there is a course being offered on Internet over the Internet. It is a listserv. Something like that would be a good thing to offer. Some kind of course on how to use the Internet that was self-training or correspondence. There are lots of things it would be neat to access. Like this guy in a pickup truck is going around to different countries, right now he is in Brazil I think, and kids ask questions over the Internet and he asks natives and gets the answers. Another university has a contest on Internet on finding stuff. They pose a question and then give people so much time to find the answer and then they give different ways that people got the answer. It shows how to do research and find things on the Internet. Some of these things would be really neat for K-12. One thing they need on the Iowa Database, there are five AEAs in a pilot project with their own nodes, I think they would at least have a branch to these AEAs. Minnesota actually has individual schools that are on the web where you can see pictures of the schools, the kids in them, etc.

We would look for research. Lists of questions to answer and where to find information. Also what's hot in curricular areas. Current curriculum trends. Staff development opportunities.

Special telecommunications projects. Studies and research about distance education and technology. Other users around the country. Scheduling information for the ICN, particularly K-12 courses. Grant information on grants relating to technology. Internet addresses for POP site users.

I have lots of ideas. Some of the other states have put together a wealth of information. Basically the whole department of education should be on there. Not just staff, but policies, directions, and other information. It should be structured similarly to the real department of education. Announcements and updates could be posted. By the time we get information now, it is too late to do anything with it. The database could also be used for sharing exemplary Phase three plans and projects. It could showcase exemplary pieces of what is going on in schools. Statistical data is interesting to look at, but at another level, the sharing of ideas from school district to school district would be good. I don't know if there is currently any procedure for submitting this kind of information. Staff development around the state would be interesting to know for administrators and for teachers. They get our information, but if they can't make it to ours, for instance for the mandatory human relations training, they could maybe pick it up in a neighboring AEA, etc.

Other comments

I think the database is a good idea. The whole telecommunications idea has been very, very hard for people to get a handle on. Like right now, I am supposed to be gathering data to set up routers through the AEAs. I don't even have a good information base and I work with the stuff. Training has been very hodge-podge. The key people that need to be in the know don't even know. We don't know what we should be doing. I'm not pointing fingers, but it is a reality. We thought we would be getting information and coming up with one approach would be OK. The 800 number was an excellent idea. We had one school get it, but getting the software and getting up and running was hard and there was not enough training. When we did the training, the software was not ready and so we used Net Iowa. Timing was a problem. We need better planning. We need the pieces in place. That is my biggest frustration. Getting in through Star Schools has been herky-jerky and difficult to get information. There have been software changes, etc. It was out of our control. So we turned to Net Iowa. Right now, the schools are buying the tires and the AEAs must buy the car to put on top of the tires. That may cause it to fail. My feeling about the Iowa Database is that information has not been made widely known as to what is available there. We need damn good training and we're not getting it. We don't have the background we need at the AEA. We expected and wanted to do additional training. But we haven't felt we had all the pieces we needed. Now with what has happened (loss of funding), what do we do? The best option is to go with Net Iowa. It is frustrating that while we have been making a decision, things change on you. What we were planning is no longer viable. But we've got to find good access for people.

I haven't had a lot of chance to use the Iowa Database. It is still just being developed. It is so early, it is hard to make any decisions about it. Its just too new to know.

If we had information on the Iowa Database, I would add it to the fall schedule for our user group and show them what was in it. My big question is "what is the hurry?" We know the importance of Internet, but the reality of its use in schools is different. We need to take into account the learning curve. It is difficult for teachers to get in and find their way around. Use in the schools is low at this point. People are frustrated. We had our training in January and began our user group meetings in May. Questions in May still revolved around technology issues, how to access things, etc. Teachers were still not using it yet for anything in the curriculum. It is a slow process. Phones in the classroom are still a problem Teacher time is an issue. Costs are an issue. Schools would have to pay $150 per month plus $2500 per year and it is not currently being used at that level, not enough to justify the costs. By doing things in a half-assed way, we are turning people off.

I was disappointed that we didn't get the third year funding. This project has given teachers some incentives. We need to continue the partnerships we have built. The Iowa Database should be part of the Iowa Department of Education.

Iowa was at the cutting edge only because we had the fiber in the ground (and we're lucky we still have it). None of the rest of what we have done has been very innovative. We need to pick up and emulate others. We are developing a freenet in our region. We need more information about the Iowa database. We frankly don't know anything about it.

The Iowa database does have a valuable role to play in the state. I would hate to see us, one, not have it at all, and two, create it 15 times. I would like to see us consolidate much of that information into one location. It must also be easy to use.

I wish the Star Schools funding would continue. I know when the external evaluators were here the first time, they asked what would happen if the money went away. I hope I am wrong, but what I said then was that there would be a huge dip downwards. I hope we keep going. Politics in the state just lost us eight million dollars.

Its too bad we had to kill the watts line. Now there is a lapse before anything else is up. Some teachers were pretty active users. Also, my gripe is that the Star Schools money was dished out by population. I have a sparsely populated area so of course I would complain. But places like Des Moines have access to a local line and don't have to pay the fees and they got more money, where distant areas got zapped. There was no equity. There needs to be some equitable access. Distribution should not be based just on population. We will be meeting with other ed services directors about Internet access across the state. Hopefully Star Schools and everybody will try to be supportive to get schools on the Internet. Right now there are big equity issues. Some schools will still have to pay 10 cents per minute to get access from Net Iowa while other will only have to pay the $30 per month fee. It is not equitable. It will be tough to correct.

You need to disseminate information on how to access the database and what is out there, I would put it in one of our newsletters if we knew. Others probably would too.

Not having been an ICN accesser, we haven't really gotten in to the Iowa Database. The problem has been the software. Even the last version, they changed the parameters and stuff and we had to go to the help desk to get that straightened out. We are doing more to push the ICN side of it and probably will use it more this year. We need to get people more literate about Internet. That takes a lot of time. It takes more than one or two inservices to get to use it proficiently. It takes lots of trial and error.